markets remain relatively stable despite shrinking demand
Looking for peak productivity? We're on the same page.

In paper manufacturing, optimum performance is the key to staying competitive. You need your machines to deliver continuously. We read you loud and clear. That’s why we developed our high-performance Mobil SHC™ synthetic lubricants specifically to help keep your paper plant running at maximum productivity. Because when it comes to helping you stay profitable, we wrote the book. And keep adding new chapters all the time. We don’t just make industry run, we make it fly. Visit mobilindustrial.com for more.
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“Big” Problem for Forest Certification Programs

By John O’Brien, Managing Editor
jobrien@paperage.com

Trouble is brewing in the name of the health of our forests, and two forest products certification groups are being pitted against one another more so by an outside agitator rather than the fundamental differences that separate the two groups.

The Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC) both got their start in the mid-90s with the same vision in mind: to offer voluntary, third party forestry certification that would in effect combat illegal logging and promote better forest management practices. As the two NGOs jockeyed for position, each made claims that one provided a more reputable and recognizable brand than the other — a typical healthy rivalry until . . .

. . . enter ForestEthics; a nonprofit environmental group “committed to protecting North America’s forests and the people and wildlife that depend on them,” . . . and by the way, is on a mission to smear SFI’s face into the fertile forest floor it’s trying to protect.

As you may or may not know, ForestEthics has been at odds with SFI for a number of years now but is a staunch supporter of FSC (not that there’s anything wrong with FSC). I’ve tried to figure out exactly what it is about SFI that ForestEthics’ so vehemently disapproves of — besides everything — and it appears the problem stems from SFI’s relationships with a number of “big” forest products companies, and we all know “big” companies are bad news, right?

In its latest volley of fire, ForestEthics on April 30 posted a story on its website that charges, among other things, that “SFI is not environmental leadership.” ForestEthics goes on to claim and boast that it has convinced a substantial number of big consumer products firms and other big companies who serve the public to avoid buying products with SFI certification.

Hold on a minute. Let me get this straight. ForestEthics has aligned itself with big business to advance its cause? Interesting.

Moving along, in a “tweet” on May 3, ForestEthics directed its “followers” to a story that had popped up on TriplePundit.com. If you’re not familiar with TriplePundit, the site’s slogan is “people, planet, profit.” I don’t mention that in a demeaning way. It’s not a bad website. Anyway, the story is titled “More Brands Dump Sustainable Forest Initiative’s Paper Certification Program” and it’s a take-off of the ForestEthics original story. The author echoes the views of ForestEthics and warns that SFI is in bed with the big forest products companies and is rubber-stamping certification for them.

SFI’s president and CEO Kathy Abusow apparently keeps a close eye on things and posted a comprehensive response on TriplePundit. The following is an excerpt from her comments:

“It is unclear to us what ForestEthics’ goal is. We believe they are threatening companies that buy paper, wood and packaging products, and we know they are misrepresenting our program. We know they have received funds to undermine SFI. We know that they have utilized photos from natural disasters to inaccurately portray these unfortunate events as SFI current practices. We know they are behaving irresponsibly and we know they are undermining the good work of both SFI and FSC, as many buyers are growing tired of Forest Ethics, and by association, the important topic of forest certification.”

She makes a good point, especially about ForestEthics undermining the work that both certification groups are trying to accomplish.

I don’t know who appointed ForestEthics judge and jury of the forest products industry, but the group needs to re-evaluate the second part of its name because its own ethics are questionable.
Now you can save three ways with one additive on chemical costs in your deinking process! The new DEKA can replace one-half of your costly surfactants, improve your pulp brightness, and lower ink residual numbers as well.

Sound too good to be true? In documented mill tests, DEKA has replaced fully 50 percent of expensive surfactant dosage without adversely affecting deinking performance. And laboratory studies prove DEKA usage increases pulp brightness up to 5 GE brightness points. Plus, additional lab deinking tests have demonstrated ERIC values lowered by 74 percent.

DEKA is also versatile — flotation or wash deinking processes both benefit from this revolutionary new deinking aid.

Contact Thiele today for details on how your deinking process might benefit from using DEKA. We’ll be glad to show you the test results and set up a trial in your mill.
Boise to Close Two Paper Machines at International Falls Mill

Boise Inc.'s chief executive said that two paper machines at the company’s International Falls, Minnesota mill will be closed by the fourth quarter of this year.

The machine closures will impact about 300 jobs and reduce the company’s uncoated freesheet capacity by approximately 115,000 tons per year.

“To improve the cost competitiveness of our Paper business, where we operate against the background of secularly declining demand for our products, we have made the difficult decision to close two paper machines and an off-machine coater at our International Falls mill,” said Alexander Toeldte, Boise’s President and CEO, in the company’s first quarter earnings statement.

“These closures, which we expect to occur no later than fourth quarter 2013, will reduce our annual uncoated freesheet capacity by approximately 115,000 tons, or 9%, and allow us to focus our efforts on key products and machines that drive our profitability, improve our cash flow, and enhance the overall competitiveness of our International Falls mill and our Paper business.

“This decision will result in the loss of approximately 300 jobs. We understand the impact this decision has on our dedicated employees, as well as the community of International Falls. We appreciate their efforts and support over the years,” Toeldte concluded.

The International Falls mill is an integrated mill with four paper machines which have a combined capacity of 533,000 tons per year of uncoated freesheet (UFS). The mill also operates one off-machine and one on-machine coater, along with four Will and one Lenox sheeters. In addition, the pulp mill has the capacity to produce 390,000 tpy of kraft pulp.

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NORTH AMERICA

Georgia-Pacific to Acquire Buckeye Technologies for $1.45 Billion

Georgia-Pacific LLC on April 24 announced that it had reached an agreement to acquire all of the outstanding shares of Buckeye Technologies’ common stock in a deal valued at approximately $1.45 billion, including debt.

Under the terms of the deal, which has been unanimously approved by both companies’ boards of directors, stockholders of Buckeye Technologies will receive $37.50 in cash per share, representing a premium of approximately 29 percent based on the average closing price of Buckeye Technologies’ common stock over [the week prior to the announcement].

Georgia-Pacific on May 7 then said that an entity controlled by Georgia-Pacific, GP Cellulose Group LLC, launched its previously announced tender offer for all of the outstanding shares of common stock of Buckeye Technologies at $37.50 per share net to the holder in cash.

“Buckeye Technologies’ competitive assets and capabilities strongly complement Georgia-Pacific’s existing cellulose business and products.”

– Jim Hannan, president and CEO, Georgia-Pacific

“Buckeye Technologies’ competitive assets and capabilities strongly complement Georgia-Pacific’s existing cellulose business and products,” said Jim Hannan, president and CEO of Georgia-Pacific.

John Crowe, Buckeye’s chairman and CEO, added, “This transaction enables our stockholders to realize significant value, while also representing an important next step in the growth of Buckeye Technologies.”

Buckeye’s manufacturing assets include a specialty pulp mill at Perry, Florida; cotton cellulose mills at Memphis, Tennessee, and Lumberton, North Carolina; and mills producing nonwovens at Mt. Holly, NC, and Steinfurt, Germany. Buckeye also has global sales offices in Beijing, the United Kingdom, France, Italy and Switzerland. The company has approximately 1,200 employees worldwide.

Georgia-Pacific is one of the world’s leading manufacturers and marketers of building products, tissue, packaging, paper, cellulose and related chemicals. The company employs nearly 35,000 people worldwide.
International Paper in Talks about Combination of xpedx and Unisource

International Paper in April entered talks with Unisource regarding a proposed business combination of xpedx, International Paper’s distribution business, and Unisource.

Both xpedx and Unisource are business-to-business distributors of printing, packaging and facility supplies.

The discussions were initiated when Unisource approached International Paper about a possible merger, and on April 19, 2013, the parties entered into a non-binding letter of intent to explore a possible transaction.

The letter of intent outlines a “Reverse Morris Trust” transaction in which International Paper would contribute the assets of xpedx to a newly-formed corporation, and receive a cash dividend financed with debt in the new corporation’s capital structure. This new corporation would be spun off to International Paper shareholders and immediately thereafter merged with Unisource in a transaction intended to be tax-free to International Paper and its shareholders.

The amounts of the relative ownership in the merged company by International Paper and Unisource shareholders, and the amount of the dividend payment to International Paper, are the subject of further negotiations between the parties.

Following the spin-off and merger, the new company will include Thilmany Papers’ Nicolet and Kaukauna mills and Wausau Paper’s Mosinee and Rhinelander mills, all of which are located in Wisconsin, as well as the output of Verso Paper’s number five paper machine in Jay, Maine.

Roger Prevot, CEO of Packaging Dynamics, commented, “This is truly an extraordinary opportunity to contribute our Thilmany Papers business to form a larger specialty papers company that will deliver lasting value to customers, employees and to the communities in which it operates, and for us to focus exclusively on our attractive downstream packaging and converting businesses.”

“By combining Thilmany and Wausau’s Specialty Paper Business, we and KPS are establishing one of the leading specialty paper companies in North America.”

– Russ Wanke, Vice President and General Manager, Thilmany Papers

Russ Wanke, Vice President and General Manager of Thilmany Papers, said, “Our team here at Thilmany is proud to be playing a critical role in the creation of a major new Wisconsin-based company. By combining Thilmany and Wausau’s Specialty Paper Business, we and KPS are establishing one of the leading specialty paper companies in North America. We believe the combination will result in a company with the product breadth and customer reach to capitalize on the growing worldwide demand for specialty papers.”

Closing of the Thilmany Papers transaction is conditioned upon the completion of the Wausau transaction, ratification of a new collective bargaining agreement between the new company and the United Steel Workers, required regulatory clearances, and certain other customary closing conditions.

Packaging Dynamics expects to finalize the deal in mid-2013, but cautioned that there can be no certainty or assurance about the timing, specific elements or completion of a transaction.
Nekoosa Coated Products Acquires IGI Corp.

Nekoosa Coated Products on April 22 announced that it acquired IGI Corp., the parent company of RTape Corp. and CET Films Corp.

Paul Charapata, CEO of Nekoosa Coated Products, will lead the new organization, whereby RTape and CET Films will operate as divisions of Nekoosa Coated Products.

“We are excited about this unique opportunity to combine two market leading businesses that are centered on a common goal of providing exceptional value to their respective channel partners. The unified strength from this combination will provide our employees and customers with outstanding long term growth opportunities,” Charapata said.

RTape is based in South Plainfield, New Jersey and manufactures a wide range of products for the sign, screen print and digital printing markets.

CET Films is headquartered in Lakewood, New Jersey and manufactures custom extruded films for a range of niche graphic arts and ancillary markets.

BillerudKorsnäs to Sell PM 2 at Gavle Mill

BillerudKorsnäs has agreed to sell a kraft and sack paper machine at its Gavle pulp and paper mill in Sweden to the newly formed company SwedPaper AB.

The divestment of the paper machine (PM2) is the result of a condition set by the European Commission in its November 2012 approval of the combination of Billerud and Korsnäs.

PM2’s production in 2012 accounted for approximately 2% of BillerudKorsnäs’ total combined sales volume. About 60 people are involved with the operation of the machine and will be offered employment with SwedPaper.

Other operations at the Gävle mill will not be affected by the sale and will remain in BillerudKorsnäs’ ownership.

The parties have signed long-term commercial agreements, under which BillerudKorsnäs will, among other things, supply input items such as pulp, steam and water to SwedPaper.

Under the terms of the deal, BillerudKorsnäs will sell SwedPaper up to 66,000 tons of pulp per year at a price in line with market value.

The machine divestment is conditional upon the approval of the EC and relevant authorities.

The newly created SwedPaper AB was established by four private investors — Mikael Colebring, Peter Ekman, Lars-Ake Brännström, and Lars-Eric Boreström (through their separate companies) — all with experience in the paper industry.

In addition, SwedPaper has reached agreement with Ekman & Co, whereby Ekman will distribute PM2’s products.

Glatfelter Completes Acquisition of Dresden Papier

Glatfelter has completed the acquisition of Dresden Papier GmbH from Fortress Paper Ltd. for EUR 160 million (USD $210 million) subject to a post-closing working capital adjustment.

Dresden Papier, based in Heidenau (near Dresden), Germany, is the leading global supplier of nonwoven wallpaper base materials. Nonwoven wallpaper offers characteristics such as dry strip-ability, high tear resistance, and no material shrinkage or expansion when wet.

“This acquisition adds another industry-leading nonwovens product line to our Composite Fibers business and we believe the global nonwoven wallpaper market will continue to grow at a compound annual growth rate of at least 10 percent,” said Dante C. Parrini, Glatfelter’s chairman and chief executive officer.

“This acquisition will also provide additional operational leverage and growth opportunities for Glatfelter globally, particularly in large markets such as Russia and China, and other developing markets in eastern Europe and Asia,” he added.

Glatfelter financed the acquisition through a combination of cash on hand and borrowings under its existing revolving credit.

Resolute to Restart Its Gatineau, Quebec, Newsprint Mill

Resolute Forest Products said in its first quarter earnings report that it expects to restart its Gatineau, Quebec newsprint mill early this month to offset the recent machine closure at its Calhoun, Tennessee, mill.

The mill has been shut down since April 2010.

According to a report in the Ottawa Business Journal, the mill is reopening as a lower-cost operation as the result of a new labor agreement, the operation of just one machine, and a cogeneration power plant ready to begin operation in June.

The mill will employ 130 workers, down from its former 330.

Resolute’s CEO Richard Garneau in an interview said the mill will produce newsprint that can be sold in North America or for export elsewhere.

EUROPE

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EUROPE

UPM Completes Sale of Stracel Paper Mill Site in France

UPM has completed the sale of assets and part of the land of the UPM Stracel paper mill site in France to Blue Paper SAS, the joint venture company of VPK Packaging Group NV and Klingele Papierwerke.

“We are very pleased that we have been able to find a good solution to the Stracel mill. Blue Paper offers a new industrial future for the site and a new opportunity for a number of Stracel employees,” said Jyrki Ovaska, President of UPM’s Paper Business Group.

Blue Paper will convert the former coated paper mill to produce recycled fiber-based fluting and test-liner with production expected to start in the fall of this year.

Blue Paper SAS is creating 130 new jobs at the mill that have been offered to former Stracel employees.

The sale of Stracel was part of UPM’s plan to adjust its magazine paper and newsprint paper capacity to match the needs of its global customer base originally announced in August 2011.

UPM stopped production of coated magazine paper at the mill on January 4, 2013 as part of its overall capacity reduction plan.

Smurfit Kappa Accelerates Closure of Containerboard Machines at Townsend Hook

Smurfit Kappa has pushed up the timing of the closure of two existing containerboard machines at its paper mill at Townsend Hook in Kent, UK, which will make way for their replacement with a single, more modern machine.

The corrugated packaging company was originally planning to close the machines in 2014 and bring the new machine online in early 2015.

However, Smurfit Kappa announced on May 3 that the machines would be closing this July in a bid to “advance the start-up” of the new machine.

The company said in a statement, “We have decided to bring forward the closure of our two existing paper machines at our Townsend Hook mill in the UK. They have a combined capacity of 250,000 tonnes and are expected to close on 1 July 2013, after the completion of a consultation process with all employees, instead of 2014 as originally planned.

“We are bringing forward the closure in order to extend the training period for our workforce, advance the start-up of the new paper machine and increase the pace of the expected ramp up. The facility will be rebuilt (using a machine acquired from the Cadidavid liquidator in 2011) into one 250,000 tonne modern lightweight machine, which will now be operational by quarter four of 2014 rather than quarter one 2015.”

Paper2014 to be held at the New York Palace Hotel, March 23-25

The American Forest & Paper Association (AF&PA) and NPTA Alliance announced that Paper2014 will be held at the New York Palace Hotel.

Paper2014 is the premier annual paper industry business convention, providing leading executives from across the industry with engaging sessions and unparalleled networking opportunities.

The New York Palace, located on Madison Avenue, is newly renovated and will provide a stunning venue for networking in addition to being convenient to Midtown Manhattan restaurants and attractions.

Paper2014 and the New York Palace offers:

- Single location for meetings and programming that will maximize networking opportunities
- New for 2014! – Larger Tower Corner suite option is more than twice the size as previous hotels for entertaining up to 50 people.
- Best space, most amenities, with the greatest value for rooms and suites in midtown
- New for 2014! – Complimentary WiFi in guest rooms and suites
- New for 2014! – Dedicated hotel banquet staff to service your meeting needs

Paper2014 Suites

Official Paper2014 Suite holders will maximize visibility and strengthen relationships with customers, suppliers, manufacturers, publishers and distributors of printing paper, packaging material and industry suppliers.

Pre-reserve Your Suite Today

Suites sell fast and are being offered on a first come, first served basis. Pre-reserve your suite by May 31, 2013 and receive additional event passes and a chance for a free 10-seat table at the Paper2014 Luncheon. Take advantage of this great value before all suites are sold by contacting Nicole Boland by email at: nicole.boland@gonpta.com or call (312) 673-5828.

Paper2014 is hosted by the American Forest & Paper Association and NPTA.
AkzoNobel Agrees to Sell Its Purate Water Technology Business to Ecolab

AkzoNobel Pulp and Performance Chemicals (formerly Eka Chemicals) has agreed to divest its water treatment business, Purate.

The prospective buyer is US-based Ecolab Inc., a water, hygiene and energy technologies and services company. The Purate technology and service will become an offering of Nalco, an Ecolab company, and its Water and Process Services (WPS) division.

According to AkzoNobel, the parties have signed an agreement under which Ecolab will begin operating the business upon completion of the proposed deal, which is expected to occur early in June.

“We are very pleased that Purate will have an owner who can provide global opportunities for the development of this business,” said Byron Smith, Director Strategy and Transformation, AkzoNobel Pulp and Performance Chemicals.

The divestment is in line with AkzoNobel Pulp and Performance Chemicals strategy launched in early 2012. The company will continue to focus on global leadership positions in pulp bleaching, paper chemicals, colloidal silica and expandable microspheres.

Purate is a technology for small-scale production of chlorine dioxide and is also sold to the paper industry where it is used for bleaching of special pulp.

Andritz to Supply Sun Paper with Two Tissue Machines

Andritz said that it has received an order from Shandong Sun Paper in China to supply two tissue machines with steel yankees for the production of high quality facial and toilet paper. The machines will be installed at the Yanzhou mill, Shandong province.

The value of the sale was not disclosed.

The new PrimeLine W8 tissue machines are designed for speeds of 2,000 meters/minute, with a paper width of 5.62 meters. Each machine will be equipped with a PrimeFlow two-layer headbox including dilution control, a PrimeDry Steel Yankee with a diameter of 18 feet, and a PrimeDry ReEvaporation HeatRecovery system.

The scope of supply also includes a stock preparation plant and automation system.

The first tissue machine is scheduled for start-up in May 2014 and the second at the beginning of 2015.

According to Mr. Ying Guangdong, Vice President and Chief Engineer of Shandong Sun Paper, the investment in the two new tissue machines is part of an expansion program to become one of the five largest tissue producers in China within the next 10 years.

Lorentzen & Wettre Introduces Stylus Roughness Tester Emveco

Lorentzen & Wettre, a member of the ABB Group, introduces the L&W Stylus Roughness Tester Emveco — a paper laboratory instrument that measures the micro-surface roughness of paperboard and linerboard. The evaluated property is called microdeviation, which is a measure of the topography of the paper or board surface, and a characteristic that correlates well to how a paper or board will print.

This new product is a replacement of the well-known EMVECO Stylus Roughness Profiler System 210-R, used in the industry for many years.

All measurement and analysis is done inside the instrument, no extra software or computer is needed. The testing procedure is fully automated. A photocell detects the presence of sample. The reference head is automatically lowered against the sample to rest against the paper sample. The reference head moves at a constant speed relative to the sample and the stylus follows the contours of the surface. After a defined measuring distance the reference head is lifted and moved back to the start position. The sample is then fed to next measuring position by the sample feeder. Each measurement takes less than 10 seconds.

INDUSTRY SUPPLIERS

Metso Expands Its Service Center in Tianjin, China

Metso has opened an extension to its Tianjin service center that manufactures forming, dryer and filter fabrics mainly for the Chinese and Asia-Pacific market.

An inauguration ceremony was held in early May at the facility.

The Tianjin service center, located in the city of Tianjin, China, started with 45 employees in 2008, but currently employs 200 service professionals.

Jukka Tiitinen, President, Services business line, Pulp, Paper and Power, for Metso, said, “This extension is in line with Metso’s strategy for services growth and brings fabrics production closer to customers in Asia.”

A new heat setting machine for fabrics manufacture and an expansion of laboratory facilities were included in the expansion project.

In addition, Metso has consolidated all fabrics production by moving its Shanghai filter fabrics operations to the Tianjin facility.

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Extended Producer Responsibility — A Solution Seeking a Problem

By Donna Harman

States are looking for new legislative ways to divert waste from landfills, for both environmental and economic reasons. A growing trend to address municipal solid waste and recycling is called extended producer responsibility (EPR).

EPR is a policy that would shift total financial responsibility for the “end-of-life” recovery of packaging and printed paper from the municipality to the manufacturer or brand owner. This means that the companies who produce and/or use the printed product (magazines, newspapers, catalogs, packaging of consumer and durable goods etc.) and/or the companies who use that packaging for their products would pay the costs of collecting that same packaging for either recycling or disposal.

EPR can take one of four forms at the state level: 1) product-specific legislation; 2) framework legislation; 3) solid waste management plan; or 4) executive order. In 2013, Iowa, Maryland, Massachusetts, New Mexico, New York, and Rhode Island introduced solid waste management/recycling and EPR legislation.

The paper and paper-based packaging industry recognizes the importance of recycling and diverting materials from landfills, which is why it has spent considerable resources to build a market-based infrastructure to recover and recycle its own products. The industry continues to inform and remind legislatures of its recycling commitment. More than 60 percent of paper consumed in the U.S. has been recovered for recycling in each of the last three years, exceeding 66 percent in 2011. The industry’s recovery rate far outpaces all other commodities in the municipal solid waste stream.

The goal of EPR — to increase recovery rates and reduce the amount of recyclable products going to landfills — is commendable. However, serious concerns exist regarding the practical implementation of any specific product stewardship program or EPR framework. In particular, this approach could result in damage to the effective infrastructure that currently exists to collect and recycle paper and paper-based packaging materials.

You can help the paper and paper-based packaging industry defeat or amend future EPR legislation by participating in industry-hosted events. Our goal is similar to those proposing EPR and programs like it: to maximize commodities recovered for recycling. But where paper is concerned, EPR is a solution in search of a problem.

Donna Harman is President and Chief Executive Officer of the American Forest & Paper Association (AF&PA). Donna is recognized by industry leaders and policymakers alike as a leading expert on public policy concerning the forest products industry.
**PAPER**

- Cascades announced that Mario Plourde, on May 9, became the company’s President and Chief Executive Officer. Plourde succeeds Alain Lemaire, who has served as Cascades’ President and CEO since 2004. Plourde previously served as COO. Lemaire will continue to serve as Chairman of the Board of Directors.

- Catalyst Paper said that President and CEO Kevin J. Clarke will step down from his position later this spring. Clarke has served as President and CEO of Catalyst since June 21, 2010.

- Mohawk is pleased to announce three management promotions and two new hires. Melissa Stevens has been promoted to Vice President, Sales; Michelle A. Carpenter has been promoted to Vice President, Environmental and Energy Stewardship; and Beth Reardon has been promoted to Regional Sales Manager, Midwest. Additionally, Mohawk has hired Pamela Reedstrom and Katherine Hoffman as Digital Specialists.

- PaperWorks Industries has appointed J. Joseph Moynihan to the position of Executive Vice President, Packaging Group. Most recently and since 2006, Moynihan was the CEO for the North American packaging operations of the Clondalkin Group in Philadelphia.

- Port Townsend Paper recently elected Roger P. Hagan as the company’s new president, effective May 1. Hagan replaces Roger Loney, who announced his resignation on March 26. Loney served as President since 2008. Hagan has managed six different mills during his 35-year career, including RockTenn’s Solvay Mill in New York, Hodge Mill in Louisiana and Stevenson Mill in Alabama.

- Sonoco announced that Sean Cairns has been promoted to division vice president and general manager of Rigid Paper and Plastics Operations in Europe. Cairns has lead the rigid paper packaging and composite can business in Europe and will continue to oversee operations in Manchester and Chesterfield, U.K., Carrickmacross, County Monaghan, Ireland, and Lievin, France.

- UPM has appointed Kim Poulsen as Executive Vice President and Group Executive Team member responsible for Paper Business Asia Pacific as of July 1 and global Corporate Relations as of May 2, 2013.

**SUPPLIER**

- Philadelphia Mixing Solutions said that Richard K. Grenville, a renowned expert in the field of mixing, has joined its Research and Development staff as Director of Mixing Technology. Most recently, Grenville served as consultant at DuPont Engineering in Wilmington, Delaware.

- Xerium Technologies has hired Mike Bly to fill the newly created position of Executive Vice President of Global Human Resources. Bly will be responsible for all of Xerium’s human resources.

**RECOGNITION**

- The Association of Suppliers to the Paper Industry (ASPI) has awarded Alexander Toeldte, President and CEO of Boise Inc., with its 2013 Customer Executive of the Year Award. The award is the highest honor that ASPI bestows on an individual. It is granted to a paper industry executive who has demonstrated extraordinary effectiveness in working with a range of suppliers to enhance productivity, efficiency, and effectiveness of his or her company using a wide spectrum of supplied products and services.

- The Paper Industry Management Association (PIMA) has named George F. Martin, president and chief executive officer, New Page, as the 2013 PIMA Executive of the Year Award. The award is PIMA’s highest honor and is bestowed on senior-level executives in the pulp, paper or converting industries for excellence in management and outstanding contributions to the industry as a whole.
**JUNE 9-12, 2013**
70th Annual Safety and Health Conference
Pulp & Paper Safety Association
Williamsburg Lodge
Williamsburg, Virginia, USA
www.ppsa.org

**JUNE 12-15, 2013**
PACWEST Conference
PAPTAC
Delta Sun Peaks Resort
Sun Peaks, British Columbia Canada
Contact: Mary Barnes
Phone: 604-988-9829
Email: barnesmm@shaw.ca
www.pacwestcon.net

**June 23-27, 2013**
59th Annual Pulp and Paper Industry Conference
IEEE
The OMNI Hotel
Charlotte, North Carolina, USA
www.ieee.org

**AUGUST 5-7, 2013**
Latin American Pulp & Paper Outlook Conference
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**SEPTEMBER 23-25, 2013**
2013 China International Paper Technology Exhibition and Conference
China National Pulp and Paper Research Institute
National Agriculture Exhibition Center
Beijing, China
www.chinapaperexhibition.com

**OCTOBER 7-9, 2013**
BLRBAC Fall Meeting
Black Liquor Recovery Boiler Advisory Committee
Crown Plaza Hotel Atlanta Airport
www.blrbac.org

**OCTOBER 14-16, 2013**
ASPI Fall Customer Alignment Meeting
Association of Suppliers to the Paper Industry
Boise, Idaho, USA
Contact: Colleen Walker
Email: cwalker@aspinet.org
Phone: 770-209-7521
www.aspinet.org

**OCTOBER 16-18, 2013**
Paper Recycling Conference
Recycling Today Media Group
Marriott Chicago Downtown
Magnificent Mile
Chicago, Illinois, USA
Phone: 800-456-0707
www.paperrecyclingconference.com
The market for coated freesheet papers remained relatively balanced most of last year. Demand continued to decline but good supply-side management maintained operating rates at reasonable if not high levels and producers also kept mill inventories low. In turn, pricing remained steady for most of the year with little change. These conditions for the most part continued into the first quarter of 2013 although a minor amount of price discounting was reported in January.

Looking at the outlook for the remainder of 2013 is a lot like looking into the rear view mirror. It appears the major market forces that were in place in 2012 will continue without significant change in 2013. Economic growth might be a little worse this year, but the difference isn’t significant enough to really shift the direction of major market drivers such as advertising or paper consumption trends.

Declining Demand
As reported in last year’s column, the main problem for coated freesheet, and for that matter essentially all graphic paper grades, is a secular decline in demand in the mature markets of North America and Europe. A key factor is lackluster advertising spending which is a major driver for coated paper demand. This is due to both secular changes and economic trends including macro-economic factors such as sluggish economic growth and stubbornly high unemployment.

In addition, an ongoing fragmentation of media markets and explosive growth in the use of digital media are negatively impacting paper demand for many grades and this impact is growing. As units sales of smart phones and now tablets grows rapidly more and more information is consumed online. This in turn has led to reduced paper consumption in a wide range of products including magazines,

Despite Fighting Major Headwinds
Coated Freesheet Market Holding Steady

Overall, the coated freesheet market remains relatively stable despite poor demand. However, the outlook remains challenging as subdued economic growth and shifts in use result in a continued shrinking of demand. The market should hold course again this year but it’s uncertain if a recent round of price increases can be supported.

By Harold M. Cody
direct mail, promotional materials, catalogs, etc.

The most recent data, for the first quarter of 2013, clearly shows the downward trend in demand is continuing and even accelerating in some segments. North American printing and writing paper demand in the January to March period decreased 5.2% compared to the same period last year, falling to 5.4 million short tons as shipments dropped 4.9% to 5.2 million tons according to the PPC. Coated freesheet grades fared a bit better than that, but demand still fell 3.9% to 4.5 million tons. Shipments fell 1.8% to 939,000 tons in the first quarter and imports dropped by almost 14% to about 218,000 tons.

In 2012, North American printing and writing paper demand fell by 6.3% to 22.7 million tons and shipments declined by 7% to finish the year at 20.2 million tons. The decrease varied by grade although all major grade segments posted declines. Coated Freesheet demand fell 3% to 4.7 million tons as shipments dropped 4% to 3.8 million tons. Imports rose a modest 1.2% to 967,000 tons. Demand in the largest segment, uncoated freesheet, plummeted 4.7% compared to 2011 to 8.8 million tons. Uncoated mechanical demand slipped 16%.

Using the first quarter data and extrapolating it for the full year projects that coated freesheet demand would decline to 4.5 million tons this year. Similarly, total printing and writing paper demand would be 21.7 million tons.

A 4% drop in demand this year — assuming no change in import market share — equates to 180,000 tons of capacity that will have to be shut in order to maintain operating rates at present levels. To push operating rates to the 94% to 95% level, which historically represents the level where producers have improved pricing power, would require additional capacity reductions.

Of course one major reason behind a relatively stable coated market over the last two years despite a drop of 7% in demand has been the closure of a significant amount of capacity. In the 2011-2012 period over 3.0 million tons of global coated capacity was shutdown with the majority of this in Europe. Most of the capacity shuts in North America were for groundwood grades, but it included shutdown of a coated freesheet machine at the Smart Paper’s mill in Hamilton, Ohio.

Grade shifts may also impact demand for coated paper this year, according to various published reports. Uncoated SC grades recently gained market share vs. coated groundwood LWC due to low prices for these grades. If this continues, coated groundwood demand could post a more significant decline this year.

**Can Prices Be Improved?**

As noted, coated freesheet prices have remained essentially level since the second quarter of 2012. By contrast, coated mechanical papers saw a modest $50/ton gain in prices during the second half of 2012. However, in early May producers announced price increases on several printing grades as they moved to set the stage for higher prices for the second half of the year. The announcements were a little surprising given the poor demand data noted above. In fact, an attempted increase of $50/ton on coated freesheet earlier in the year failed.

The increases include $20 to $30/ton for coated freesheet announced by Sappi, West Linn and NewPage for July 1. Increases were also announced on LWC ($40/ton, July 1), and SC ($50/ton, July 1) by most producers.

While the announcements may have been a little surprising, a couple of factors would tend to indicate it might go forward. These include the fact that coated freesheet prices didn’t increase last year when coated groundwood grades did. In addition, imports play a larger role in coated freesheet than in coated groundwood and offshore mills face serious cost pressures due to in particular to higher pulp prices but also higher costs for freight and energy. With imports accounting for about one-fifth of the coated freesheet market, part of the rationale behind the domestic increase may be the fact that offshore producers have been trying to increase prices to match the higher prices in other markets.

The bottom line is that coated freesheet markets are expected to continue to remain relatively stable even as U.S. demand shrinks an additional 3-4% this year. Producers would like to gain a little more margin, or at the very least recover some lost margin by implementing the price gains. If they continue to manage supply it might just work but it’s not a done deal.

Harold Cody is a contributing writer for PaperAge. He can be reached by email at: HCody@paperage.com.
heads up

In my January/February column (pgs. 16-17), I recorded what worries European business managers of our industry. Having flagged up three major issues — closures and job loss, alternative energy, and China — senior executives are now trying to find a way forward. The circumstances are not good. Many CEOs have already written-off 2013. The region’s high prices, growing financial deficits, low-cost competition and rising input costs have convinced some executives that Europe is financially dead. One told me that “everything’s for sale.” He was not planning any new investment, is considering closures and possibly exiting the industry.

A Changing Industry
It’s been clear for some time that two major changes are now irreversible; (1) the move to bio-mass energy, and (2) the steady decline of traditional printing grades — newsprint in particular. However, there is no consistent agreement by the industry about what to do next.

Some paper producers have opted for closures and will exit certain grades. UPM, for example, closed its Stracel coated paper mill in France and sold it to a Belgian and German packaging joint venture company Blue Paper SAS, who plans to convert the mill for the production of fluting and testliner from recycled paper. The Belgian partner in the joint venture, VPK Packaging, will also move into southwest England and build several converting units on a greenfield site.

And UPM has gone further. It closed PM3 at its Rauma Mill in Finland and also PM4 at Ettringen in Germany. Both machines produced coated magazine paper. In addition, UPM Docelles in France is to be sold or closed. The mill produces uncoated woodfree papers. The combination of those three measures reduce UPM’s annual paper capacity in Europe by 580,000 tonnes.

The Burgo Group (Italy) has also opted for closures. In March it closed the Mantua mill, the only newsprint mill left in Italy. PM1 at Avezzano, which made coated woodfree (CWF) printing grades was closed, and the Ardennes mill in Belgium which also makes CWF paper and hardwood pulp is under review.

Stora Enso is also going for a major rethink of its business structure and organization. Anyone who has spent time in this business may be puzzled, as I am, by chief executive Jouko Karvinen’s plans to integrate the Business and Living business area with the Printing and Reading business area. I can see it’s all wood-based, but I can’t get my head around living room furniture, coffee tables, magazines and newspapers in one division. The other two business areas are Renewable Packaging and Biomaterials.

But Karvinen has good reason for this rethink. Commenting on first quarter results he said, “… the reality is that our European printed media markets have shrunk by more than 20% since 2008, and there is no reason to believe that the structural change of the past five years will slow down or change direction in the foreseeable future.”
Different Lines of Thinking

PWC’s 16th Annual Global CEO Survey on the forest, paper and packaging sector also records differing strategies for recovery and survival, mainly between European and UK companies. While the European economy stays flat, UK CEOs are actively reshaping their businesses as they anticipate changes. These include cost reduction plans and M&A or joint ventures. The significant bit here is that the Brits are looking at domestic deals, not cross-border stuff. This suggests that UK businesses see more opportunity for growth in their domestic market, even though it’s mature.

I find this hard to understand. Why expand into an already crowded market? The answer seems to be, according to the PWC survey, that UK CEOs are wary of overseas acquisitions or are struggling to find acceptable international targets. This is an elegant way of saying that UK paper and board producers just aren’t big or wealthy enough to compete on a bigger playing field.

European producers have placed R&D and innovation as one of their top three priorities in the next two years. That’s not the case in the UK. Despite government investment in innovation to push for exports, only a third of UK paper and board makers said they will increase R&D. It seems they’re keener to invest in growing their domestic customer base and improving operational efficiency.

I’m reaching a conclusion that as 80% of the 6 million tonnes per year of UK production capacity is owned by non-British companies, this cautious domestic focus may be driven by head offices in Helsinki, Stockholm, Atlanta or northern Italy. I contacted three consultants and asked why the UK is cautious while the Eurozone producers are expanding. I got no clear answer other than when you’re looking at the short-term, the familiar, local market is a safe bet. I don’t agree with that, but one packaging CEO told me, “If you can’t afford it, don’t buy it.”

I asked him, “If you could afford to expand into a non-domestic market, which would it be?” He replied, “USA (24%), China (19%), Germany (11%) then France (11%).”

To put it mildly, the prospects for growth in Europe are certainly confusing. Europeans have their view and UK producers have another. If I were the minister for growth in the British government, I would be worried by the timidity of our paper and board makers. Is risk aversion in the UK becoming the norm in business practice?

David Price is a contributing writer for PaperAge. He can be reached by email at: DPrice1439@aol.com.

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With the help of curtain coating technology, the Ji’an mill’s PM 3 reduced its need for virgin pulp and created a popular new grade of linerboard.

By Pauliina Purola, Jouni Kemppainen, and Marjaana Lehtinen

There were two options when the Ji’an Group was making a decision about the coating technology for its new Metso-supplied coated board production line PM 3 at its mill in Haiyan County, Jiaxing City in Zhejiang Province, China.

Option 1 was to go for traditional blade coating with two or three blade coating stations and the conventional way to produce coated white top liner. The three-ply base board would consist of a top ply of bleached kraft pulp, an under top of DIP and a bottom ply of OCC. Coating would be applied on white top base board. The quality of the coating layer was not a major issue because the base board would be white anyway.

“Our customers want a low price but high quality. Curtain coating technology allows us to meet these requirements.”
— Shu Junming, Vice General Manager, Ji’an Group Co, Ltd.

“Our customers want a low price but high quality. Curtain coating technology allows us to meet these requirements,” says Shu Junming, Vice General Manager, Ji’an Group Co, Ltd.

Above: OptiLayer curtain coating station is very compact in size.
However, option 2 presented a tempting, almost daring, alternative: Metso’s novel multiply OptiLayer curtain coating. It would mean creating a totally new grade — curtain coated liner board for the Chinese market that would benefit both the mill and its customers. In this grade, there would be no, or significantly less, virgin fibers in the base board. The top ply would, instead, consist of AOCC, while the under top would be OCC and the bottom ply OCC. The brown base board would be coated with blade coating, two-layer curtain coating and again with blade coating.

**BROWN BECOMES TOTALLY WHITE WITH CURTAIN COATING**

The coating process and new grade was developed through successful cooperation between the Ji’an Group, Metso and Styron (a chemical supplier) to get the most out of curtain coating.

Before the big decision was made, Ji’an, Metso and Styron ran a number of coating trials in Finland and Switzerland with both white and brown base board. Blade coating revealed a clear difference between the two bases. Whereas the white base board produced smooth and uniform brightness after coating, the surface of the brown base board showed clear mottling of brightness. In other words, the brown base partly showed through the coating layer.

However, the simultaneous application of the two-layer curtain coating layers resulted in excellent and even coverage of the brown base board. And better yet, this curtain coated brown board had the same superior physical and printing properties as standard coated white top linerboard. The mill quickly recognized the cost savings potential of curtain coating, provided the amount of virgin fiber could be significantly reduced.

“The blade technology would have made it very difficult for us to be competitive in the market, since the biggest challenge in producing coated liner is its fiber cost. Our production line needs to be more capable and produce something unique. Being able to offer our customers a better price will be our core advantage when competing with our competitors in the future,” Junming pointed out.

“Curtain coating technology will give us a cost saving advantage and also a wider selection of furnish such as AOCC and mixed office waste instead of white pulp. We will be able to supply a low-cost, high-quality product to the market,” he added.

**CLEAR COST SAVINGS ACHIEVED**

Today, curtain coating is an integral part of the Metso-supplied containerboard line that started up at the Ji’an mill in November 2011. The 7.25-metre-wide PM 3 is the world’s fastest coated board machine with a design speed of 1,200 m/min. Its annual production capacity is approximately 475,000 tonnes of coated and uncoated white top testliner in the basis weight range of 130-280 g/m².

Since uniform coverage curtain coating makes it possible to run PM 3 without expensive bleached fiber, the mill has been able to optimize raw material costs and thereby reach clear savings in production costs.

“The cost saving is estimated to be 200 RMB per produced paper ton,” says Wen Xuefeng, Mill Manager at Ji’an.

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**Curtain Coating Benefits**

- Production cost savings
- Each layer can be tuned for the desired property and cost
- Stable and even profiles, no need for adjustment
- Excellent runnability and efficiency
- Easy curtain width control
- Wide development possibilities in quality, production costs and raw materials
**Curtain Coating Principle**

In curtain coating, one to three coating layers are applied at the same time, thus the name multi-layer coating. It creates an even coating layer regardless of the base surface. By fine-tuning the functionalities of different layers in a cost-efficient way it is possible to customize the product’s surface properties and improve its optical properties.

The application of coating layers within one station minimizes coating-related drying and space needs, which is especially important in rebuilds.

“Feedback from the market has been positive, and orders for the new grade have been increasing. This is closely linked to our improvement in board quality.”

— Wen Xuefeng, Mill Manager, Ji’an PM3

“Feedback from the market has been positive, and orders for the new grade have been increasing. This is closely linked to our improvement in board quality.”

As of late-2012, PM 3 produces about 50% coated and 50% uncoated linerboard. In the future, the target is to run about 70% of coated linerboard.

**HIGH PHYSICAL AND PRINTING PROPERTIES**

Coating coverage as well as other physical and printing properties, such as brightness uniformity, smoothness and gloss, are on a high level with the curtain coating. The coating weight is approximately 30 grams in total.

“The appearance of the curtain coated board made from A0CC and OCC is the same as that of white top coated liner made from bleached pulp when the coating formula has been adjusted correctly,” Xuefeng adds.

Multilayer curtain coating technology has demonstrated its capabilities to the satisfaction of Ji’an mill. According to Li Congding, Technical Manager, the overall performance and efficiency of the new coating line have been good.

“Metso’s technology support and its experienced experts have been very important. After all, most of our staff had never even touched a coating machine before. I appreciate all the knowledge and ideas about the new process that we have been provided. This will enable us to make good use of the curtain coating technology,” Junming concluded.

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Paper industry leaders converged from around the world to attend Paper2013, held March 17-19 at the Fairmont Hotel in Chicago. Co-hosted by AF&PA and NPTA, this year’s theme, “Passport to Opportunities,” focused participants on the global marketplace and areas of growth for the paper industry.

True to the legacy of this premier annual event, registered participants gained insights from influential members of industry and related issues in the Paper2013 sessions, while networking with their colleagues throughout the convention.

**Paper Check-Off Information Session**
Investing in our Future – The Paper Check-off, CEOs from four companies answered questions and gave their own perspectives as to why they are supporting the Paper Check-off.

Alexander Toeldte, president and CEO of Boise Inc. gave an overview of the initiative and moderated an informal discussion with fellow-business leaders: David Scheible (president and CEO of Graphic Packaging International, Inc.); David Paterson (president and CEO of Verso Paper Corp.); and Ken Wallach (chairman and CEO of Central National-Gottesman Inc.). A capacity audience heard testimonials on the research conducted, the current status of the check-off process and answered audience questions on how the initiative could bring a positive return on investment through a sustained promotional effort.

**Industry Leadership Session**
AF&PA Chairman David Scheible welcomed the audience and announced the recipients of the 2013 AF&PA Recycling Awards. AF&PA President and CEO Donna Harman moderated a panel of distinguished industry leaders, as they discussed growing opportunities the industry has on the horizon in furthering the success of paper products.

Panelists included George Martin, president and CEO of NewPage; Jussi Pesonen, president and CEO of UPM; David Scheible, Alexander Toeldte, and Ken Wallach.

The CEOs discussed industry transformation in a changing world and how their companies are thinking about long-term positioning and strategies for success. They mentioned complementing traditional products with new ones, and following their consumers around the world.

U.S. (and global) R&D spending and patents in the paper industry lags compared to other major sectors. The CEOs spoke about innovation in the supply chain, products and technology, while being aware of the risks involved.

Panelists addressed future markets from the growing population around the world and increased purchasing power in countries such as China, Russia and Indonesia. While markets for non-traditional forest products are expected to grow, the U.S. was deemed to still
be one of the best markets in which to sell. Government policies create uncertainty for the industry, according to the CEO panel, by giving preference to fiber for alternative products, promoting digitization and making the U.S. uncompetitive in the global market.

The session was followed by a reception where registered attendees met current and prospective customers.

**RISI Global Paper Market Trends & Forecast Session**

Registered attendees once again flocked to hear the RISI trend and forecast session, given by John Maine and Ken Waghorne – RISI’s vice president of World Graphic Papers and vice President of World Packaging, respectively. Maine and Waghorne gave an outlook for the printing-writing paper, paperboard and recovered fiber markets. Changes in developing and established markets were discussed as driving demand and growth in the global marketplace.

**Paper2013 Luncheon**

Donna Harman, AF&PA president and CEO, welcomed the full International Ballroom to the Paper2013 Luncheon and previewed a few of the efforts AF&PA is undertaking to advocate for paper including a new video. Luncheon sponsors International Paper and Graphic Packaging International each delivered remarks.

NPTA Chairman Don Clampitt of Clampitt Papers presented the 2013 Stanley O. Styles award to David S. McGehee, president of Mac Papers. McGehee received a standing ovation from the crowd for his 40-years of dedicated service with Mac Papers and his contribution to the industry.

Dr. Jeffrey Rosensweig gave the keynote presentation on tapping into the new global economic opportunities and the relationship to the paper industry. Dr. Rosensweig, a renowned professor at the Goizueta Business School at Emory University in Atlanta, confirmed that the U.S. is still the global economic leader, but there is definite growth and opportunity beyond our shores.

Populous markets are not limited to China and India. Companies should also look to African nations such as Angola and Nigeria, and Indonesia in Asia for the next wave of potential market growth.

The current U.S. manufacturing output indicates economic recovery – it is nearly back to 2007 levels. This rebound in manufacturing output has been much swifter than the one following the 2002 dip in output.

U.S. exports (and imports) sharply declined in 2009, but now the U.S. is exporting more than ever before. Jobs in health care and social assistance have been growing despite the recession due to the aging population.

Rosensweig’s advice to youth: learn Spanish and Chinese and study science.

**Editor’s note:** SAVE THE DATE! Paper2014 will be held at the New York Palace, March 23-25, 2014. For information about attending next year’s event, please contact Nicole Boland (NPTA) at: nicole.boland@gonpta.com or call (312) 673-5828.
Gaining Control of Your Former’s Water Weight

Determining optimal water weight in the former combined with using the right forming fabrics result in improved board quality and a reduction in drive power.

Dr. Andreas Eichler

A familiar scenario: moisture fluctuations downstream of the former, and as a result, problems in the press. What is the answer? Folding box board producer Mayr-Melnhof Karton (MM Karton) worked with Voith to find the solution for its recycled cartonboard mill in Neuss, Germany.

Two OnQ FormingSens units and four PrintForm HR forming fabrics improved board quality on the mill’s BM 5. In addition, installing these products allowed the required drive output in the forming section to be reduced by 13%. This alone represents a cost saving of 87,000 euros per year.

Following a successful startup of the two OnQ FormingSens sensors upstream of the DuoFormer D and suction couch roll, and of the four PrintForm HR forming fabrics, MM Karton and Voith’s forming specialists jointly carried out a series of tests, including adjusting the vacuum at various dewatering elements. The goal was to improve board quality and reduce drive power, while maintaining the dry content.

The results of all tests were impressive:
- Output of main drives reduced by 180 kW, equivalent to a cost saving of 87,000 euros/year
- Dry content downstream of former increased by 1%
- Formation improved by 7.5%
- Bursting strength increased by 5%
- Tensile strength improved by 7% in MD and 2% in CD
- Reduced fabric wear
- ROI in less than six months

The tests focused on dewatering of the filler ply and back ply, as this is where the highest absolute water content is introduced to the board. Consequently, these areas have the greatest potential to reduce energy consumption and improve quality. One quality parameter that is particularly significant is board formation. The formation of the filler ply has a decisive impact on the formation of the entire board, so the decision was made to insOnQ FormingSens there, before entry to the DuoFormer D unit.

Figure 1. Multiply board and packaging machine with two OnQ FormingSens sensors.
In an initial test, the vacuum in the crucial dewatering elements in the back ply was reduced by 15% on average. In the case of the filler ply, the flat suction box was switched off altogether and the vacuum in the OrthoFlow suction box reduced by 50%. Dry content was consistent during this test. The underliner was then included in a second test. In this case, the relevant vacuum levels could be reduced by 30% on average with a constant dry content.

**TWO SENSORS FOR OPTIMUM RESULTS**

As every forming wire has different features, repeated resetting is always necessary in order to achieve consistent results. In addition, it takes time to achieve an accurate alignment of all dewatering elements. Due to real-time measurement of dry content by the OnQ FormingSens sensor, operating personnel can accurately set and control the former. A complex forming section with a very large number of dewatering elements always needs at least two sensors to optimize individual dewatering elements and control the entire dewatering performance. OnQ FormingSens has a very compact design, allowing the sensor to be positioned at almost any location in the former.

**OTHER APPLICATIONS SUCCESSFULLY MASTERED**

At Koehler Kehl GmbH, Germany, OnQ FormingSens was installed downstream of the HiVac, the last dewatering element on PM 2 — a thermal paper machine. By reducing the vacuum at a relatively early dewatering element — in this case the wet suction box — the water weight at the end of the former could be reduced. A lower water weight means a higher dry content, and in this case a higher production speed. By reducing the vacuum at the wet suction box by 20%, the dry content at the end of the former could be increased by 0.4%. This reduced the required drive output and the amount of wear on the forming fabric.

**CONCLUSION**

By using OnQ FormingSens units and PrintForm HR forming fabrics, Voith was able to offer its clients an ideal solution from a single source. The customers benefitted from having just one point of contact and enjoyed further advantages as a result of Voith’s combined process expertise in clothing and automation:

- Improved dewatering
- Less maintenance and wear
- Improved formation
- Higher strength qualities
- Better couching of multi-ply board
- Reduced power consumption of vacuum pumps and drives
- Enhanced occupational safety

*Dr. Andreas Eichler is Product Manager for Voith. He can be reached at: Andreas.Eichler@voith.com.*
Many of the paper machine runnability problems that are difficult to detect, monitor, and control are caused by hydrophobic particles. These can be, for example, binder-rich particles in coated broke, wood pitch or stickies associated with recycled fiber. The most important characteristic indicating propensity for runnability problems has proven to be the size, or the increase in size, of hydrophobic particles.¹²

The concentration of wood fibers and fillers at the wet-end of a paper machine is typically less than 1%. Hydrophobic particles move freely in diluted water loops but can agglomerate due to hydrodynamic forces. As the agglomeration of these particles proceeds in the wet-end of the paper machine, a critical size of agglomerate is reached. At this point, the larger particles may start to cause deposition on the paper machine.

Uncontrolled agglomeration often leads to poor runnability and defects such as holes or spots, in the finished paper. Hydrophobic agglomerates with diameters of up to 15 micrometers or more have been observed in the paper machine’s water circuits. The agglomeration of four of these particles could make a hole in a 60 micrometer thick light-weight coated (LWC) sheet.

Controlling the concentration and size of hydrophobic particles in the wet-end of a paper machine can dramatically improve the efficiency of the machine. When the particle size is kept under control, the attachment, or fixation, of these particles to the fiber surfaces is stronger. The detrimental substances can then be removed from the process with the paper web, without the risk of re-deposition. The Kemira KemFlite® concept has been developed explicitly to monitor, and ultimately mitigate, the agglomeration of these hydrophobic substances.

TOOLS & MECHANISMS
The most important process survey tool in the Kemira KemFlite concept is Kemira Flyto.* This unique method is based on modified flow cytometry (MFCM), which measures the size, quantity and even the degree of hydrophobicity of particles in samples taken from various points in the pulping and papermaking process.

MFCM is a technique that uses light scattering to determine the concentration and size of particles in a fluid. Both forward and side scattering are measured in a flow field in conjunction with the fluorescence of the population, to determine the size and to characterize each particle in the fluid, respectively.

Compared with traditional wet-end measurements, such as turbidity and cationic demand, Kemira Flyto offers a much broader and detailed view of hydrophobic particles at key process

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Figure 1: Particle populations and constituents measured by the Flyto method.
points. This includes white water and clear filtrate, which are pulp dilution sources typically used in the papermaking process. The impact of retention chemistry on agglomeration can also be measured, which can bring tremendous insight to deposit issues observed on the paper machine.

Kemira Flyto is both a tool for process analysis and product screening; it can be used to develop deposition control programs for coated broke, wood pitch and stickies. Figure 1 shows examples of particles that can be analyzed with Kemira Flyto.

Information about different particle populations - especially the particle sizes - is particularly interesting in the majority of deposit control cases. The effect of adding cationic chemicals, such as fixatives, on particle size can be studied. In doing this, the agglomeration related to and originating from overdosing of cationic chemistries can be understood and avoided.

Traditionally, turbidity has been the key, and often only parameter, used to develop and control fixative programs used for deposit control. The control strategy has historically been to reduce turbidity as low as possible. The limitation with this approach is there is no indication of what the application is doing to the particle size. Therefore, it cannot be determined if the hydrophobic particles have been fixed or agglomerated. Figure 2 demonstrates this phenomenon.

Figure 2 shows with increasing fixative application the turbidity expectedly decreases in a linear manner while the particle size stays constant. As the fixative is further increased, the turbidity continues to decrease, however there is a steep climb in particle size. This is the point of overdose, significantly increasing the propensity for deposition.

CASE STUDIES

Kemira Flyto analysis has been used to support many wood pitch and coated broke applications at full scale. In order to manage concentration and mitigate agglomeration in the short loop, it is important to fix hydrophobic particles when they are small (before agglomeration).

Figure 3 demonstrates the effect of three (3) different fixative technologies on the quality of coated broke filtrate in a trial period. The fixatives were dosed after the coated broke tower, just before the coated broke thickener.

Fennofix K94, a low-charge fixative, showed no agglomeration tendency on the coated broke filtrate. Although
it showed significant residual particle concentrations, the average particle size was low. More aggressive chemistry such as a dimethylamine-epichlorohydrin (DMA-Epi), Fennofix 50, showed much greater particle concentration reduction (i.e. a lower particle count in the filtrate), but with larger average particle sizes at higher dosage.

The worst performer was the reference fixative blend, which was very aggressive in reducing particle concentration, but at the cost of dramatically increasing the particle size. Coated broke filtrate agglomeration, which was detected by the Kemira Flyto method, was present in the short loop circulation, where the white water exhibited agglomeration. This was the principle driver for causing defects in the finished paper.

When the reference fixative blend was replaced with the less aggressive fixatives, the agglomeration of hydrophobic particles in the coated broke and subsequently in the white water was significantly reduced. When this occurred, the finished paper defects were no longer present.

**KEMIRA AUTOFLITE**

Kemira has continued to innovate in the area of hydrophobic particle measurement and management. A new online measurement has been developed. Kemira AutoFlite* can be used to monitor the agglomeration risk of different process waters, such as broke filtrate or paper machine white water.

The Kemira AutoFlite measurement has correlated accurately with the laboratory Kemira Flyto data and, most importantly, with paper machine runnability, including paper defect rates. The combination of Kemira AutoFlite and Kemira Flyto offers the fastest way to identify the optimal technology, application point and application rate, for preventing deposition in the paper processes. Figure 4 shows a schematic of a Kemira AutoFlite installed on a coated broke line.

**CONCLUSIONS**

Kemira Flyto has been used in laboratory work to develop the optimal treatment program for pulps (such as pressure groundwood (PGW) and bleached Kraft) and coated broke, for mitigation of wood pitch and white pitch, respectively. It has also been used to measure the efficiency of such programs in full scale application.

Kemira Flyto analysis has been proven to be a highly effective tool for problem solving and trouble-shooting mill runnability and quality problems. In addition to the laboratory measurements, a novel on-line tool, Kemira AutoFlite, has been developed to monitor and control the dosage of deposit control products on paper machines producing light-weight coated (LWC) and coated free sheet (CFS) grades.

* Kemira KemFlite, Kemira Flyto and Kemira AutoFlyte are all registered trademarks of Kemira Oyj.

References

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Dealing with Disruption

Profound changes are happening in the forest, paper & packaging industry. CEOs are dealing with significant shifts in demand patterns, increasing scarcity of supply, and overcapacity in some regions and grades.

Editor’s Note: The following is a summary of some key findings from PwC’s 16th Annual Global Survey in the forest, paper & packaging sector, based on interviews with 38 CEOs in 15 countries.

Forest, paper & packaging (FPP) CEOs aren’t as pessimistic about the global economy as CEOs across our whole sample. But far fewer are confident that they’ll be able to generate revenue growth this year. Why the discrepancy? The answer probably lies in structural changes now happening in the industry.

Dealing with overcapacity through cost reduction
It’s no secret that there’s a lot of overcapacity in the FPP industry, particularly in some paper grades. That may be why around half of FPP CEOs say they’ll stick with the status quo rather than increasing capital investment plans this year. They’re also intensely focused on trimming the fat.

92% of sector CEOs say their company has implemented a cost-reduction initiative in the past 12 months, and 89% are planning to cut costs in the coming 12 months too — more than in any other industry sector. Some headcount cuts look to be inevitable — and next year 18% of FPP CEOs expect them to affect a significant amount of the workforce (more than 8%).

Exiting unprofitable businesses
Part of the challenge for FPP CEOs lies in the capital intensive nature of the sector, which makes it difficult to exit businesses completely without taking a huge hit to the balance sheet. Despite the hurdles, 29% of sector CEOs say they’ve divested a majority interest in a business or exited a significant market in the past 12 months. Capital intensiveness is probably one reason why FPP CEOs are less likely than peers in other sectors to worry that new entrants could pose a threat to growth.

Hope for the future
There are signs that FPP CEOs are beginning to see the light at the end of the tunnel. While sector CEOs are less optimistic than their peers about prospects for the next 12 months, looking further ahead over three years they’re actually more upbeat than the overall sample. 53% are very confident of revenue growth over this longer time-scale.

Getting a handle on scarce resources
Three-quarters of FPP CEOs worry that energy and raw material costs could pose a threat to growth, far more than the average across our overall sample. When it comes to securing natural resources, half of FPP CEOs say they’ll increase their investments in this area over the next 3 years, more than double the overall average. That’s especially telling in light of the pressure on capital investment levels.

Changing the business model
We believe that innovation will play a critical role in helping the FPP sector transform its business model. So will new types of partnerships within and outside of the industry.
When we asked CEOs to tell us their top 3 investment priorities, R&D and innovation and new M&A/joint ventures/strategic alliances tied for second place, right after improving operational effectiveness. In both areas the emphasis is stronger than across the sample as a whole. For the forest and paper companies in our sample, this result probably reflects the broadening uses that are now being found for fibre (bioenergy, biofuels, textiles etc.).

Moving a business in new directions inevitably means taking on entirely new types of risk. But the majority of FPP CEOs tell us they don’t plan to change their strategies this year. In our view the industry may need to take another look at risk.

Strong leaders and committed staff to make it happen
FPP companies have already put in place a number of leadership programmes to help their managers cope with all the changes and they’re increasing their efforts to engage with their people more generally too. More than half of FPP CEOs say that their employees influence strategy ‘significantly.’ Sector CEOs also acknowledge that they need to match the pay rates of peers in order to retain talent.

To see the full results of the 16th Annual Global Survey, please visit www.pwc.com/ceosurvey.
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AkzoNobel’s new Jupiá Chemical Island in Brazil is now operational and has started supplying the Eldorado Brasil Celulose pulp mill, which is the biggest single pulp mill line in the world.

This state-of-the-art Jupiá facility represents one of AkzoNobel’s largest investments in Latin America. It will supply, store and handle chemicals for the 1.5 million tons per year Eldorado mill.

During the construction process our Swedish and Brazilian engineers worked side by side with local contractors to accommodate our customer’s every need. The result is a cost-efficient, safe, reliable and environmentally friendly production of sodium chlorate and chlorine dioxide. The AkzoNobel Jupiá Chemical Island will also handle other pulp making chemicals for the Eldorado mill.

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