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PaperAge

JULY/AUGUST 2023

**Sustainable, Cost-Effective
and High-Quality Tissue
with Hybrid Technology**

**Tissue Production –
Make It Safe!**

Moving forward towards more autonomous operations



More and more companies aim to increase the autonomy of their mill or plant operations. In an autonomous mill or plant, an autonomous system can monitor its own performance, which brings several benefits, like improved safety and efficiency, lower costs and reduced environmental impact. Digitalization and more autonomous operations also mean that there is less need for human intervention. The role of people will continue to be important, evolving towards supervising and ensuring that different process areas perform well together, and towards managing exceptions. Operations and maintenance work will become more collaborative in the future as well.

Whether you are just beginning your digital transformation journey or you're further along in the process, Valmet's framework helps you recognize the necessary steps and building blocks. Our experts are there to support you as you move towards more autonomous and optimized operations.

More on valmet.com/autonomousoperations



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Reallocating Strategic Substrates = Difficult Decisions

By John O'Brien, Managing Editor
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On August 1, WestRock announced it will permanently cease operating its paper mill in Tacoma, Washington and conclude production by September 30. The Tacoma mill employs about 400 people.

The news comes on the heels of the company's May 2 announcement that it will permanently cease operating its paper mill in North Charleston, South Carolina on August 31. The North Charleston mill employs approximately 500 people.

From a human factor standpoint, these decisions were obviously extremely tough to make to say the least.

"One of the most critical factors we consider when making the difficult decision to close a facility is the impact it will have on the lives of our team members," said WestRock's CEO, David Sewell.

However, from a business standpoint, these decisions are critical to the future financial health of the company.

On an Aug. 3 earnings call, Mr. Sewell told analysts, "We've been proactively optimizing our footprint by closing less efficient facilities and consolidating production and larger plants. Our goal is to improve our cost structure, drive efficiencies, and improve our return on invested capital."

Mr. Sewell noted, "Similar to our previous mill closures, the Tacoma mill required significant investment to remain competitive, and we did not see a path to achieving our return targets. By closing the mill, we can shift capital toward other projects with greater returns. Additionally, with Tacoma and our previous mill closures, we are lowering our costs and improving our overall margin structure."

Also on the call, WestRock's CFO Alex Pease put the mill closures in perspective from a cash cost of production.

"...to give you a sense, the Tacoma mill that we just closed, the cash cost per tonne is around \$900 a tonne, based on the number that I'm looking at. The mills that we would reallocate capacity to, and

I'm just going to use generalities, are around \$200 to \$400 a tonne cheaper than the mill we closed. So that will give you a sense of sort of the incremental contribution that we would get from reallocating some of the capacity to those other mills."

With Tacoma and North Charleston, WestRock has shut four mills in the past two years — the other two being its containerboard mill in Panama City, Florida (primarily heavyweight kraft, and fluff pulp, with a combined annual capacity of 645,000 tons); and its recycled paper mill in St. Paul, Minnesota (200,000 tons per year of corrugated medium).

Mr. Sewell explained, "With the announcement of the Tacoma closure, our mill portfolio is substantially different than it was 15 months ago. As we evaluated our assets, we considered mill profitability, technical age of assets, ongoing capital needs, product mix, strategic fit, and our network flexibility. With our announced closures of higher cost mills and production capacity, we are reducing 1.9 million tons of capacity. These closures enable us to repurpose anticipated annual capital spending, averaging approximately \$120 million and exit noncore end markets."

During the call, Mr. Pease emphasized that capacity of "strategic substrates" related to the closures is not being eliminated from WestRock's production platform.

"The headline that everybody should hear on the call is that, the mills that we've closed, we're going to reallocate the strategic substrates to other mills in the network, so there won't be any EBITDA leakage associated with that. It'll actually be EBITDA and ROIC accretive. On Tacoma, specifically, just the breakdown of it's 510,000 tonnes of total capacity — about 105,000 tonnes of that is linerboard, 275,000 tonnes of that is white top, 60,000 tonnes is paper and about 70,000 tonnes is pulp. So, with the exception of the pulp, all of that other capacity will be reallocated around the network again."

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NORTH AMERICA

Resolute to Sell Thunder Bay Mill to Affiliate of Atlas Holdings

Resolute Forest Products, a subsidiary of Domtar and a part of the Paper Excellence Group, recently entered into an asset purchase agreement to sell its Thunder Bay pulp and paper mill in Ontario, Canada, to an affiliate of Atlas Holdings.

The Thunder Bay mill produces northern bleached softwood kraft and northern bleached hardwood kraft pulp, along with newsprint and directory grades of paper.

Resolute will continue to operate its sawmills and woodlands operations in Northwestern Ontario. At the closing of the transaction, the parties will enter into certain ancillary agreements, including a long-term woodchip and biomass supply agreement pursuant to which Resolute will continue to provide chips and biomass to the Thunder Bay mill.

“The mill is an exceptional asset,” said Remi Lalonde, President and CEO of Resolute. “I am confident that the dedicated and talented team in Thunder Bay will have a prosperous future, and I sincerely wish them all the best.”

According to Atlas Holdings, Thunder Bay will operate as a standalone company

and a member of Atlas’ global family of manufacturing and distribution businesses

“We are extremely excited about the opportunity at Thunder Bay,” said Atlas Principal, Daniel Merriam. “As always,

we will partner with strong local leadership to strengthen Thunder Bay’s operations, to serve Thunder Bay’s customers in a highly responsive fashion, and to strongly support the local and regional community. We

recognize Thunder Bay’s historic and unique position in Ontario and the broader pulp and paper industry.”

The sale of the Thunder Bay mill is a requirement under the consent agreement entered into between Domtar Corporation and the Canadian Commissioner of Competition and registered with the Canadian Competition Tribunal in connection with its review of Domtar Corporation’s recent acquisition of Resolute.

The transaction, expected to close in the second half of the year, is subject to the satisfaction or waiver of closing conditions, including obtaining required regulatory approvals.



Pratt Industries Opens New Corrugated Packaging Plant in Cedar Hill

Pratt Industries on June 27 officially opened its new \$253 million manufacturing box factory in Cedar Hill, Texas.

At capacity, the 1.1 million square foot plant — one of the largest and most modern of the company’s 71 factories spread across 25 U.S. states — will provide 375 full-time manufacturing jobs.

“We’re very honored to be in Cedar Hill and we’re committed to the great state of Texas — in fact this is our 5th box factory here,” said Anthony Pratt, executive chairman of Pratt Industries.

Pratt said the Cedar Hill Corrugating and Innovation Center brings the company’s statewide workforce to more than 1,000, with a total investment of more than \$550 million. The company’s total U.S. investment is now more than \$10.25 billion.

The Cedar Hill site will produce retail specialty products as well as corrugated boxes and in-store displays for some of America’s leading companies using the company’s signature 100% recycled containerboard.

In addition to bringing new jobs to Cedar Hill, Pratt will also sponsor a training and development program in collaboration with the city and school district.

Sofidel to Invest \$185 Million to Expand Tissue Operations in Circleville

Sofidel held a groundbreaking in Pickaway County, just south of Circleville, Ohio, on July 11 to mark the proposed expansion of the company’s Circleville tissue mill and converting facility.

Due to increasing demand for its tissue products, Sofidel is looking to invest \$185,000,000 to expand the facility by 500,000 square feet. The expansion will allow employment to grow by 100 people.

“Our success has been Ohio’s success,



and I appreciate the ongoing partnership with Pickaway County, the city of Circleville, One Columbus, and JobsOhio to help make it happen,” said Luigi Lazzareschi, CEO of Sofidel. “The demand for our products is only outweighed by the immeasurable dedication and hard work of our employees, and we’re excited to expand our footprint in the Columbus Region.”

Pending state and local approvals, construction is expected to be completed in 2025.

NORTH AMERICA

Mondi to Acquire Hinton Pulp Mill from West Fraser for \$5 Million

Mondi has agreed to acquire the Hinton Pulp mill in Alberta, Canada, from West Fraser Timber for a total consideration of USD 5 million. The Hinton mill has the capacity to produce 250,000 tonnes per year of unbleached kraft pulp.

As part of the deal and through a long-term contract with Mondi, West Fraser will continue to supply fiber to the Hinton mill via residuals from West Fraser's Alberta sawmills.

Mondi's intention, subject to pre-engineering and permitting, is to invest EUR 400 million in an expansion of the Hinton mill primarily for a new 200,000 tonne per year kraft paper machine, anticipated to be operational from the second half of 2027.



According to Mondi, the acquisition of the mill and investment in the paper machine will fully integrate operations in the Americas and enable Mondi to secure the long-term supply of high quality, cost

competitive kraft paper into its network of 10 paper bag plants in the region.

"Strategically, we are focused on investing to support the growing market demand for our sustainable packaging products, while delivering attractive mid-teen returns through cycle," said Andrew King, CEO of Mondi. "The acquisition of Hinton is an excellent opportunity for us to secure locally produced kraft paper for our bags customers, helping to meet the current and anticipated future growth in demand for industrial and mailer bags in the Americas."

The acquisition is subject to customary regulatory clearance and is expected to close towards the end of 2023.

PaperWorks Acquires The Standard Group in Louisville, Kentucky

PaperWorks Industries in June completed the acquisition of The Standard Group. Founded in 1932, The Standard Group is a converter of custom printed paperboard packaging with a manufacturing location in Louisville, Kentucky.

Terms of the deal were not disclosed.

"The Standard Group aligns well with PaperWorks in terms of emphasizing quality and innovation while serving customers which value sustainable,

paper-based packaging," said Brian Janki, President and CEO of PaperWorks. "The Standard Group meets PaperWorks' strategic criteria including increased vertical integration, complementary geographic fit with our mill system and folding carton operations, while serving diverse end markets," Janki added.

Lou Cortes, President and CEO of The Standard Group, who will join PaperWorks, commented, "PaperWorks provides an

opportunity for the Louisville facility to prosper within a larger folding carton network, leverage broader technical capabilities, and benefit from mill integration to provide the highest levels of service to our customers."

By integrating The Standard Group's folding carton facility in Louisville and welcoming 120 team members, PaperWorks will operate an integrated folding carton business including two mills and six converting facilities employing over 1,400 team members.

SOUTH AMERICA

Suzano to Reduce Production of Market Pulp in 2023 by Four Percent

Suzano, the world's largest producer of hardwood pulp, said it expects to reduce its production volume of market pulp by approximately 4% throughout the year when compared to its nominal production capacity and historical volumes.

Suzano said its decision is based on the fact that this volume production would not

bring adequate returns for the company during a more complex pulp market period.



Suzano's installed production capacity of market pulp is around 10.9 million tons per year.

According to documentation from Suzano's 2022 earnings presentation, the company produced about 10.6 million tons of market pulp in 2022. A four percent reduction would be in the range of about 424,000 tons.

SOUTH AMERICA

Bracell Begins Site Work for New Tissue Mill in Sao Paulo

Bracell recently announced the start of civil works for the largest tissue mill in Latin America. The mill is being built next to Bracell's pulp mill in Lençóis Paulista, São Paulo, Brazil. In all, the company is investing R\$ 5 billion in the city, R\$ 2.5 billion of which in the construction of the tissue mill, and the other half of the amount for investment in a plant for the production of sodium chlorate and hydrogen peroxide.

"Our new tissue mill will be the most productive unit in Brazil," said Praveen Singhavi,



President of Bracell. "This project reinforces our commitment to invest in the country, contributing to productivity and sustainability across the business. It is a milestone that makes

us very optimistic about the development prospects, as we want to add value and further expand the downstream tissue operations."

The new mill will have four tissue production machines, which will be converted into two products — toilet paper and paper towels. With a production capacity of 240,000 tons per year, the mill will be one of the most modern and sustainable in the world, 100% automated and the only one in Brazil to operate completely free of fossil fuels.

Bracell expects start-up of the mill in 2024.

UPM's First Shipment of Pulp from Paso de los Toros Mill Sailed from Montevideo

UPM announced that the loading of the first shipment of pulp from the new UPM Paso de los Toros pulp mill was successfully completed at UPM's new deep sea pulp terminal in Montevideo, Uruguay.

Saga Welco's M/V Saga Faith sailed on May 26 carrying a full shipload of about 50,000 tonnes of UPM Euca pulp to Asia, where the vessel arrived in mid-July.

UPM's pulp terminal in the port of Montevideo started operations in October 2022. The highly specialized, fit-for-purpose pulp terminal operates 24/7 with an annual operating capacity of over 2 million tonnes of pulp and 80 ships per year. The terminal

employs 100 people, reaching 200 during the loading and unloading of cargo ships. The terminal includes a large storage warehouse of over 50,000 square meters with capacity to store 150,000 tonnes of pulp, a control room, logistics spaces and offices.

UPM operates the terminal on a 50-year concession.

The US\$240 million port investment is a fundamental part of UPM's US\$3.47 billion growth investment in Uruguay that includes the new port and the Paso de los Toros pulp mill, which started operations April 15, 2023, and investments in local facilities in Paso de los Toros.



UPM and Saga Welco are partners with a long-term maritime transport agreement for the transportation of the UPM Euca pulp from the ports of Nueva Palmira and Montevideo to customers around the world.

EUROPE

Lecta to Cease Production of Coated Woodfree Paper at Condat Mill

Lecta in June announced that it will cease paper production on PM4 at its Condat mill in Le Lardin St Lazare, France, due to the significant decline in demand for graphic papers.

PM4 produces coated woodfree paper (CWF).

Looking ahead, the Condat mill will focus entirely on the production of specialty papers — glassine and C1S — on the mill's other paper machine, PM8, which was recently converted



from the production of CWF.

Additionally, Lecta is investing in a refuse-derived fuel (RDF) boiler to provide a cost competitive energy solution for PM8 and reduce the Condat mill's carbon footprint through a reduction of CO2 emissions, which is in line with the company's sustainability strategy and goals.

The RDF boiler will be operational by mid-2024.

EUROPE

UPM Permanently Cuts 485,000 Tonnes of Graphic Paper Capacity in Europe

UPM at the end of June announced its decision to close 485,000 tonnes of graphic paper capacity in Europe. The company permanently closed paper machine 6 at UPM Schongau in Germany, and paper machine 4 at UPM Steyrmühl, Austria.

PM 6 produced 165,000 tpy of uncoated publication papers and PM 4 produced 320,000 tpy of newsprint.

UPM Schongau continues to produce graphic paper on the remaining cost-competitive machines.

“We took the opportunity to implement structural changes to make our site fit for future challenges,” said Wolfgang Ohnesorg, General Manager, UPM Schongau. “I would

like to express my sincere thanks to our entire workforce, which has managed to transfer all paper grades previously produced on PM 6 to PM 9 in such a short timeframe.”

UPM is in the process of transferring ownership of its Steyrmühl Mill to Heinzl Group — a transaction that will be completed at the beginning of 2024. The mill has two paper machines — PM 4 and an idled machine that Heinzl plans to convert to the production of kraft paper.

Ernst Spitzbart, General Manager, UPM Steyrmühl, said, “I admire the professionalism and flexibility of our employees, who are already working conscientiously to integrate UPM Steyrmühl into the Heinzl Group.”



Stora Enso Expands De Lier Site with New Packaging Production Facility

Stora Enso has opened a new corrugated packaging production plant at De Lier, the Netherlands. The site is part of the recently acquired De Jong Packaging Group, now Business Unit Western Europe in the Packaging Solutions division. The expansion adds a new, second plant to the De Lier site and equipping the facility with two new corrugators to augment the existing two. The De Lier site’s products currently include boxes and trays for fresh produce, horticultural and industrial applications, e-commerce and transport.

The newly opened plant at De Lier utilizes a variety of sustainable solutions, such as 3.8 MWp of solar panels installed on the roof, which will provide electricity to an equivalent of 1,000 households. The residual heat generated by the corrugators will be used to heat the site’s office buildings, further reducing their carbon footprint.



The new plant also boasts a fully automated paper reel warehouse, two corrugators and conversion machines utilizing a multi-level conveyor, along with an advanced waste management system. Moreover, it features an improved internal transport system that facilitates safer movement through the production process while reducing the need for forklift trucks.

The De Lier site develops and sells premium fiber-based packaging products and services and employs approximately 500 people. The new plant is now in the commissioning phase and its first orders have been shipped.

New Repulping Line for Post-Consumer Beverage Cartons Starts Up in Poland

With a joint investment of approximately EUR 29 million by Stora Enso and Tetra Pak, a new recycling line for post-consumer beverage cartons is starting operations in Poland. Stora Enso has invested approximately EUR 17 million into a new repulping line that will recover the carton fibers, and Tetra Pak along with Plastigram have invested a total of approximately EUR 12 million to build the new line.

The line has the potential to triple the annual recycling capacity of beverage cartons in the country from 25,000 to 75,000 tonnes and provides scope to absorb the entire volume of beverage cartons sold in Poland, as well as additional volumes from neighboring countries, including the Czech Republic, Hungary, Slovakia, Latvia, Estonia and Lithuania.

Featuring an annual capacity of 50,000 tonnes, the state-of-the-art line at Stora Enso’s Ostroleka Mill in northeastern Poland handles solely beverage carton material separation, detaching fibers from polymers and aluminum.

The Ostroleka Mill is a combined pulp, paper, containerboard and corrugated box mill.

This new paper recycling facility is complemented by Czech company Plastigram Industries, that, together with Tetra Pak, is industrializing a solution to recycle polyAl into new products.

PolyAl (sometimes referred to as PE-AL) is the non-fiber material left over after the repulping process. This material contains a mixture of the plastics and aluminum that have been used as functional barrier materials, caps and closures in the beverage cartons.

The new line is set to ramp-up recycling of beverage cartons throughout Central and Eastern Europe, signaling the beverage carton industry’s willingness to support the circularity goals of the proposed EU Packaging and Packaging Waste Regulation.

INDUSTRY SUPPLIERS

Valmet to Acquire Körber's Business Area Tissue for EUR 380 Million

Valmet on July 7 entered into an agreement to acquire Körber Group's Business Area Tissue for approximately EUR 380 million on a cash and debt free basis subject to ordinary post-closing adjustments.

Körber's Business Area Tissue offers process technologies and related services for converting the jumbo reels of tissue paper into final tissue products for consumers and the Away-from-Home segment. It has a broad offering in the tissue converting industry with converting lines for tissue rolls and for folded tissue including product packaging, as well as services and digital solutions.

"With this acquisition, Valmet takes again a new step forward and strengthens both its Process Technologies and Services segments," said Pasi Laine, President and CEO of Valmet. "The combination of Valmet's current tissue making technologies, services and automation offering and the acquired

tissue converting offering and competences is a good strategic fit complementing each other and forms a strong basis to create new business opportunities and serve our customers even better. We are happy and proud to warmly welcome all the new colleagues from Körber's Business Area Tissue to become part of Valmet."

In 2022, Körber's Business Area Tissue's net sales amounted to EUR 305 million and its adjusted EBITDA margin was approximately 12%. The company has a strong and growing services business, which accounted for 36% of total net sales in 2022. The business employs around 1,170 employees in Italy, Brazil, the U.S., China and Japan.

Valmet estimates that the acquisition will



bring sales, service and cost synergies worth EUR 8 million by the end of 2026.

The acquired business will be integrated into Valmet's Paper business line as a separate business unit.

The acquisition is estimated to be completed at the earliest on November 2, 2023, subject to competition authority approvals.

Albany International to Acquire Heimbach for EUR 153 Million

Albany International on June 14 announced it has entered into a definitive agreement to acquire privately held Heimbach Group, a leading supplier of paper machine clothing, in an all-cash transaction valued at approximately EUR 153 million, including the assumption of EUR 21 million net debt.

The transaction has been unanimously approved by the Albany Board of Directors and Heimbach's shareholders, and is expected to close in the second half of 2023, subject to customary closing conditions and regulatory approvals.

Headquartered in Düren, Germany, Heimbach is a global supplier of paper machine clothing for the production of all grades of paper and cardboard on all machine types as



variety of sectors, such as the food processing, chemicals, construction materials and automotive industries. The company has approximately 1,200 employees and nine production facilities across Germany, China, Spain, Switzerland, the United Kingdom, Belgium and Italy.

Heimbach had 2022 annual revenue of

approximately EUR 161 million.

"The acquisition of Heimbach is an exciting opportunity to create significant value for our shareholders as well as for our customers as the partner of choice," said Bill Higgins, President and CEO of Albany. "With Heimbach, we gain increased scale and complementary technology, while broadening our geographic footprint to efficiently serve markets in Europe and Asia.

"This transaction also provides an opportunity to leverage Albany's expertise to drive meaningful margin expansion in Heimbach's operations and cash flows that can be reinvested in high-growth areas of the company."

Albany will fund the transaction with cash held outside the United States.

INDUSTRY SUPPLIERS

Voith Opens New OnPerformance.Lab in Sao Paulo, Brazil

Voith announced the opening of a new OnPerformance.Lab (OPL) site in Sao Paulo, Brazil.

According to Voith, the new OPL site is specifically designed to support paper manufacturers in automation, digitalization and achieving their sustainability goals.

“With the new location in Sao Paulo, we want to offer our customers even greater proximity and support,” said Ivan Medeiros, Head of Digital and Automation at Voith Paper South America. “We want to help them use digitalization profitably and increase their resource efficiency to reliably achieve their goals.”



Remote support represents an important part of Voith’s service portfolio and complements its existing on-site services.

In a press release, Voith said, “Customers can quickly and easily access the expertise

of the experts and jointly find solutions to individual challenges. In this way, short-term problems can be solved efficiently, and long-term optimization projects can be carried out successfully.”

The OPL in Sao Paulo is part of a global initiative by Voith to offer comprehensive know-how and expertise to its customers worldwide. Existing OPL locations can be found in Heidenheim, Germany; Kunshan, China; and Tokyo, Japan.

The opening of additional regional offices is planned to further strengthen the regional footprint, Voith noted.

ANDRITZ to Supply Heinzl Group with Paper Machine Conversion at Steyermühl Mill

ANDRITZ will supply Heinzl Group with a paper machine conversion at Steyermühl mill in Austria. The project involves the mill’s idled newsprint machine, PM3, which will be converted to the production of kraft papers for packaging.

The conversion project has been launched by the Heinzl Group, which will take over the Steyermühl mill from UPM by January 1, 2024.

Once rebuilt, PM3 will become PM6 and have a design speed of 1,500 m/min and a paper width at the reel of 6,300 mm. The rebuilt machine will produce up to 150,000 tons per year of brown and white low basis weight kraft paper and sold under the Heinzl Group’s well-established STARKRAFT brand. The paper will be used for shopper bags, pouches, and other flexible packaging products.

“With this investment, STARKRAFT will become one of the world’s leading brands for bleached and unbleached kraft paper,” said Werner Hartmann, COO of Heinzl Pöls. “ANDRITZ PrimeLine technology is already successfully operating at our Pöls and Laakirchen mills. The current rebuild by ANDRITZ will help us expand our



product portfolio for sustainable packaging.”

ANDRITZ’s scope of supply includes in addition upgrades of the stock preparation, approach flow, and broke handling systems as well as extensive upgrades of the automation systems (DCS, QCS, MMD), detail engineering packages, and mechanical erection. In addition, the existing steam and condensate system will be redesigned and upgraded, which will contribute to saving energy.

Start-up of the rebuilt machine is scheduled for the beginning of 2024.

Gardner Systems Joins Deublin Company

Deublin Company announced that Gardner Systems is now a key part of Deublin. This broadens Deublin’s capabilities in the design, supply, and installation of steam and condensate systems for paper machine dryer sections.

“We are excited to welcome Gardner Systems to the Deublin family,” said Roland Rauch, interim CEO of Deublin Company. “This alliance will allow us to offer our customers complete turnkey services for rebuilding or optimizing paper machine dryer sections. Gardner Systems has been the leading supplier of high-quality steam and condensate systems to the paper industry, and this will enable Deublin to serve our customers as a complete solution provider.”

Gardner Systems was founded in 1967 and is headquartered in Appleton, Wisconsin. The company has a team of experienced engineers and technicians who design and install steam and condensate systems that meet the specific needs of paper mills.

Deublin is a leading provider of rotary unions and slip rings for a wide variety of industrial applications and manufacturing processes. The company was founded in 1945 and is headquartered in Waukegan, Illinois.

The Paper Excellence Group Announces Renewed Business Unit Structure

The Paper Excellence Group on July 28 announced its updated organizational structure for its business units following the recent acquisitions of Resolute Forest Products in March 2023 and Domtar in November 2021.

Steve Henry, currently Domtar's Executive Vice President and Chief Operating Officer, has been named President of the Paper & Packaging business unit with responsibility for all legacy Domtar pulp, paper and packaging operations as well as Paper Excellence Canada's Port Alberni and Crofton mills. Mr. Henry is an experienced pulp and paper executive with 28 years of industry expertise. His career has spanned diverse roles in strategy, project management, and general management in corporate and mill environments. Prior to joining Domtar, Mr. Henry held a series of progressive positions with International Paper, Weyerhaeuser and Georgia-Pacific.

The leader of the Pulp & Tissue business unit consisting of all legacy Resolute pulp, paper and tissue operations as well as the non-integrated Paper Excellence Canada pulp mills will be announced at a later date. **Richard Tremblay** will continue to serve



Steve Henry, currently Domtar's Executive Vice President and Chief Operating Officer, has been named President of the Paper & Packaging business unit with responsibility for all legacy Domtar pulp, paper and packaging operations as well as Paper Excellence Canada's Port Alberni and Crofton mills.

as Senior Vice President, pulp, paper and tissue operations, and **John Lafave** will serve as Senior Vice President, pulp and tissue sales. Mr. Tremblay and Mr. Lafave will serve as co-leaders of the business unit until a permanent leader is named. **Hugues Simon** will continue to serve as President of the Wood Products business unit. Mr. Simon has extensive

experience in wood products operations, finance and sales with Resolute and its predecessor companies.

Steve Henry, Richard Tremblay, John Lafave and Hugues Simon will report to the Paper Excellence management board, chaired by Non-Executive Chairman John Williams, former President and Chief Executive Officer of Domtar.

"My heartfelt congratulations to Steve, Richard, John and Hugues. Each of them brings extensive experience, demonstrated success, and a commitment to continuous improvement," said Mr. Williams. "We have assembled an impressive team of business leaders who are uniquely qualified to deliver superior results and position the organization for continued growth."

Resolute's **Remi G. Lalonde**, President and Chief Executive Officer; **Sylvain A. Girard**, Senior Vice President and Chief Financial Officer; and **Stephanie Leclaire**, Senior Vice President, corporate affairs and Chief Legal Officer, have decided to leave the organization on September 1, 2023, to pursue other interests. Messrs. Lalonde and Girard and Ms. Leclaire will receive change-in-control payments and benefits pursuant to their respective agreements with Resolute.

“I am very proud of the work the team has done since I took over as President and CEO, and deeply honored to have had the privilege to serve as their leader,” said Mr. Lalonde. “Now that Resolute is part of a private company, the time is right for me to pass along to the individual business unit leaders more of the responsibilities to manage their businesses and take their performance to the next level in the Paper Excellence family. I would also like to express my appreciation for the outstanding contributions of Sylvain and Stephanie who have played an instrumental role in Resolute’s transformation.

“Resolute and all its wonderful people, past and present, will always have a very special place in my heart, as I deeply cherish the memories from 14 years together. I am extremely grateful for everything the company has done for me,

and I sincerely wish Paper Excellence and its leaders nothing but the best with our amazing people and great assets. This industry, particularly in Canada, can benefit from a strategic investor with a generational vision like Paper Excellence, willing to support it by deploying capital to unlock fully its true potential, and they have made that intention clear. This is good for Resolute’s employees, our mills and our communities,” Mr. Lalonde added.

“We express our deep gratitude to Remi for his outstanding leadership and transformative achievements, which have made Resolute a stronger, more dynamic and competitive organization. We are thrilled to have the opportunity to build on the outstanding foundation that he and his team have established for the business,” remarked Mr. Williams. “On a personal level and on behalf

of the Paper Excellence management board, we wish Remi, Sylvain and Stephanie great success in the next chapters of their careers.”

About The Paper Excellence Group

The Paper Excellence Group is a privately held manufacturer of pulp, paper, packaging, tissue, and wood products, with a workforce of more than 21,300 in its nearly 60 locations across the Americas and Europe. Through its individual business units — Paper Excellence Canada Holdings Corporation, Domtar Corporation, and Resolute Forest Products Inc. — the Group produces nearly 12.4 million tons of pulp, paper, and packaging annually and has an annual production capacity of close to 3.2 billion board feet of lumber and other wood products. ■

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PAPER

■ *Cascades* has appointed **Jérôme Porlier** as the new President and COO of Cascades Specialty Products Group (SPG), effective July 1. Porlier joined Cascades over 10 years ago and most recently served as Vice President of Operations of the Packaging sector. He succeeds **Luc Langevin**, who after more than 12 years as the head of SPG is gradually heading towards retirement. Langevin will continue to be responsible for Cascades Recovery+.



Jerome Porlier



Luc Langevin

■ *Ilim Group* announced that its CEO, **Kseniia Sosnina**, has stepped down due to the expiration of her employment contract. **Aleksei Lomko**, Senior Vice President Legal, has been appointed Acting CEO. Lomko began his career with the Ilim in 2005 and has served as Senior Vice President since August 2018.



Kseniia Sosnina



Aleksei Lomko

■ *ProCon* announced that **Kelly L. Helein** has joined the company as the new Vice President of Business Development. Helein serves as a Board Member for the University of Maine Pulp and Paper Foundation, Smithers Pira Sustainability in Packaging (EU/US) and Specialty Papers (EU/US), and the Paper Hall of Fame Nomination Committee.



Kelly Helein

■ *Sylvamo* has elected **Tatiana Kalman** as Senior Vice President and General Manager, Latin America. Kalman joins

Sylvamo from BASF, most recently serving as managing director and senior vice president, Business Unit Personal Care Europe. Kalman succeeds



Tatiana Kalman

Rodrigo Davoli, who was elected Senior Vice President and General Manager, North America.

■ *UPM* announced that **Petri Hakanen** has been appointed Senior Vice President Technology (CTO), effective August 1. Hakanen has been with UPM for almost 30 years in various senior management positions.



Petri Hakanen

INDUSTRY SUPPLIERS

■ *Valmet* has appointed **Petri Rasinmäki** as Business Line President, Paper, effective Sept. 1. Rasinmäki succeeds **Jari Vähäpesola**, who has decided to retire after a long, successful career. **Rasinmäki** currently holds the position of Vice President, Board and Paper Mills business unit. Prior to his current position, **Rasinmäki** worked in various management positions at Valmet and Metso since 2004.



Petri Rasinmäki



Jari Vahapesola

INDUSTRY ASSOCIATIONS

■ *The American Forest & Paper Association* (AF&PA) announced **Julie Landry** as Vice President of Government Affairs. Landry joined AF&PA



Julie Landry

as Manager of Government Affairs in October of 2011. She holds a bachelor's degree in international business from Auburn University.

RECOGNITION

■ *The Pulp & Paper Safety Association* (PPSA) has awarded **Tom Stigers**, president of mill operations at WestRock, its most prestigious award — the Executive Eagle. The award is presented annually to an outstanding executive in the paper industry who has made major contributions to the cause of accident prevention in their own company and beyond. Stigers has been with WestRock for 20 years. Currently, he is responsible for the combined operations of 32 WestRock mills across the United States, Canada, Mexico, India and Brazil.



Tom Stigers

■ *Sappi North America* announced that several of its employees have received awards for their endeavors in creative graphics, leadership and innovative initiatives. TAPPI awarded **Beth Cormier**, VP of research, development and sustainability, a Women in Industry Division's 2023 Woman of the Year Award; recognized **Joseph Fernandez**, research fellow, with the 2023 Coating & Graphic Arts Division Technical Award and BASF Charles W. Engelhard Medallion and Honorarium; and bestowed **Matthew Howard**, area process systems manager, with the TAPPI Award for Best Process Control Paper. Additionally, **David Niles**, senior print and converting scientist, received the Michael H. Bruno award from the Technical Association of Graphic Arts (TAGA).



Beth Cormier

SEPTEMBER 4, 2023**PRIMA Conference**

Smithers
Marriott Vienna
Vienna, Austria
www.prima-paper.com/home

SEPTEMBER 19-21, 2023**Paper Meets Live! 2023**

AF&PA and NPTA
Opal Sands Resort
Clearwater Beach, Florida, USA
www.afandpa.org/events

SEPTEMBER 21-22, 2023**ECMA Congress 2023**

European Carton Makers Association
Barcelo Sevilla Renacimiento Hotel
Seville, Spain
ecma.org/events-and-promotion/annual-congress

SEPTEMBER 25, 2023**SPA 107th Conference**

Sheet Plant Association
(UK trade association)
The Abbey Hotel
Redditch, England
www.sheetplantassociation.com/events

OCTOBER 2-4, 2023**2023 Fall BLRBAC Meeting**

Black Liquor Recovery Boiler Advisory Committee
Sonesta Hotel (formerly the Crowne Plaza)
Atlanta, Georgia, USA
www.blrbac.net

OCTOBER 9-11, 2023**Fastmarkets Forest Products North America Conference**

Fastmarkets
Hyatt Regency Boston
Boston, Massachusetts, USA
www.fastmarkets.com/forest-products/forest-products-north-america

OCTOBER 11-12, 2023**Paper and Plastics Recycling Conference**

Recycling Today Media Group
Marriott Marquis Chicago
Chicago, Illinois, USA
paperplasticsna.recyclingtodayevents.com

OCTOBER 24-26, 2023**Specialty Papers US**

Smithers
Hyatt Regency Milwaukee
Milwaukee, Wisconsin, USA
www.specialtypaperconference.com/specialty-papers-us

OCTOBER 24-26, 2023**PAPTAC Bleaching Committee Fall Meeting**

PAPTAC
Coast Kamloops Hotel
& Conference Centre
Kamloops, British Columbia, Canada
www.paptac.ca

OCTOBER 25-27, 2023**PPC Fall Meeting & Leadership Conference**

Paperboard Packaging Council
Rancho Bernardo Inn
San Diego, California, USA
paperbox.org/events

NOVEMBER 6-8, 2023**Fastmarkets Forest Products International Containerboard Conference**

Fastmarkets
The Westin Chicago River North
Chicago, Illinois, USA
www.fastmarkets.com/forest-products/international-containerboard



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Embracing Global Partnership for a More Sustainable Future

By Heidi Brock, President and CEO, AF&PA

Across borders, the forest products industry is working to leverage opportunities that help tackle pressing issues while building a more resilient and sustainable future. Collaboration around our sustainability mission and goals is critical to the success of our industry.

This is why American Forest & Paper Association (AF&PA) members stay engaged with the International Council of Forest & Paper Associations (ICFPA) and the Advisory Committee on Sustainable Forest-based Industries (ACSFI). These partnerships play a crucial role in fostering our global voice and community.

In May, I joined ICFPA and ACSFI leaders at their annual meetings in Amsterdam.

The ICFPA represents pulp, paper, wood, and fiber-based associations, encompassing 26 countries, with many of the top manufacturers from around the world. ICFPA is guided by the leadership of Jori Ringman, Director General of the Confederation of European Paper Industries (Cepi), who currently serves as ICFPA President.

ICFPA's annual meeting included the 11th CEO Roundtable with 29 industry CEOs and association leaders from 7 countries discussing policy trends and issues of importance in our respective markets. ICFPA's 6th biennial Sustainability Progress Report was also



ICFPA recognized the 2022-2023 Blue Sky Young Researchers Innovation Award winners during the annual meeting in Amsterdam. (l-r) Jori Ringman (Cepi and ICFPA), Ilona Leppanen (Finland), Leane Naude (South Africa), Ivana Amorim Dias (Brazil), and Heidi Brock (AF&PA).

presented at the meeting.

I encourage you to download and read this report on their website (www.icfpa.org) for detailed progress being made toward global sustainability commitments.

The report provides aggregate data for 7 key performance indicators calculated by the National Council for Air and Stream Improvement (NCASI). This includes sustainable forest management, recycling, water conservation, climate, building a safer and more

inclusive workplace, optimizing industry products to contribute to the circular, biobased economy, and innovation.

The report also highlights case studies from member associations, which showcase efforts to advance sustainability, and how those commitments have a direct impact on communities near and far.

Reading the report reinforces the fact that the forest products industry is well-positioned as a global leader on sustainability. And, we have an opportunity to continue innovation across the forest products industry into the future.

For example, ICFPA is the sponsor of the Blue Sky Young Researchers and Innovation Award program. This is a global initiative for young forest sector researchers and professionals to showcase their work.

This year, ICFPA member companies nominated 14 candidates from around the world. An international jury composed of industry experts and leaders in academia and public policy selected the following candidates to receive global recognition for their innovative contributions:

- Ivana Amorim Dias (Brazil) – Purification of High-Value-Added Components from the Soluble Phase of Bio-Oil
- Ilona Leppanen (Finland) – Capturing Nano and Microplastics with Nanocellulose Networks

- Leane Naude (South Africa) – Developing More Cost-Effective Purification Method of Lignosulphonate, an Abundant and Versatile Alternative to Fossil-Based Fuels

Their work reaffirms our industry offers a place for people to make a true difference in the world through the sustainable processes and products millions of people rely on every day.

Our work, as global partners, is also sustained by ACSFI, a statutory body of the Food and Agriculture Organization (FAO) of the United Nations and led by ACSFI Chair Ross Hampton, who most recently was the Chief Executive Officer of the Australian Forest Products Association.

ACSFI is composed of senior executives from the forest products industry sector worldwide and meets annually

with the main objective of providing guidance on activities and programs of work of the FAO Forestry Department.

This work includes engaging Committee members for input on issues relevant to our industry, in support of member countries, to progress towards the United Nation’s Sustainable Development Goals.

This year was the 64th Advisory Committee on Sustainable Forest-based Industries Meeting, focused on ACSFI’s current priority areas of work, including the bioeconomy and ecosystem restoration.

Both ACSFI and ICFPA underscore the importance and value associations bring to our industry voice on a global scale. Such global partnership advances collaboration and strengthens our ability to address the complex challenges confronting our world and industry.

Through these global partnerships, we can spotlight innovation, highlight industry talent, and forge a path toward a more sustainable future.

About AF&PA

The American Forest & Paper Association (AF&PA) serves to advance U.S. paper and wood products manufacturers through fact-based public policy and marketplace advocacy. The forest products industry is circular by nature. AF&PA member companies make essential products from renewable and recyclable resources, generate renewable bioenergy and are committed to continuous improvement through the industry’s sustainability initiative — *Better Practices, Better Planet 2030: Sustainable Products for a Sustainable Future.* ■

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Domtar Holds Grand Reopening Celebration at Kingsport Mill in Tennessee

Domtar executives and employees joined state and local dignitaries on May 24 for a ribbon-cutting ceremony at the Kingsport Mill grand reopening celebration.

The event marked the completion of the mill's conversion into Domtar's first 100 percent recycled containerboard facility. The two-year project transformed the mill's uncoated freesheet paper machine into the second-largest 100 percent-recycled containerboard machine in North America, capable of producing approximately 600,000 tons of high-quality recycled linerboard and corrugated medium annually.

"Our machine is one of the most sophisticated and highly automated machines in North America," says Mill Manager Troy Wilson. "Its state-of-the-art technology is enabling us to provide



Pictured in the middle wearing blue short-sleeved shirts and holding a giant pair of scissors: (l-r) Troy Wilson, Domtar Kingsport Mill Manager; Steve Henry, President, Paper and Packaging for Domtar; and Charlie Floyd, Vice President of Strategic Capital Projects for Domtar's packaging business.

our customers a high-quality, consistent product thanks to a highly controllable,

stable and repeatable process."

The mill reopened in January and is now the largest recycled manufacturer in the state of Tennessee.

"The Kingsport Mill is blazing a trail as Domtar's first 100 percent-recycled containerboard facility," says Steve Henry, President, Paper and Packaging for Domtar. "We're building on our 175-year legacy as a fiber innovator by entering the packaging business. It's a large and growing market, and we're very excited by the customer response we've received."

Henry says the Kingsport Mill grand

The repurposed paper machine at Kingsport is capable of producing approximately 600,000 tons of high-quality recycled linerboard and corrugated medium annually.





The Kingsport Mill will use some 50,000 tons per year of Old Corrugated Containers (OCC) and recovered paper in its production of containerboard.

reopening shows Domtar is delivering on its promise to provide customers — independent corrugated converters — a full range of 100 percent-recycled Performance Linerboard and Medium with excellent strength and outstanding print performance.



Throughout the project, we did everything we could to show our contract support personnel that we cared about them,” says Charlie Floyd. “Our only priority was ensuring they would return home to their families safely. Nothing we do is more important than keeping our people safe.”

“Our customers have been delighted by the high-quality product the Kingsport team is producing,” Henry says.

Most importantly, Domtar completed the project safely. During the two-year conversion, onsite construction crews at the mill surpassed 2.5 million hours without a lost-time incident. The safety streak started when the project began in the fall of 2020.

“Throughout the project, we did everything we could to show our contract support personnel that we cared about them,” says Charlie Floyd, vice president of strategic capital projects for Domtar’s packaging business. “Our only priority was ensuring they would return home to their families safely. Nothing we do is more important than keeping our people safe.”

Wilson says the work to convert this mill would not have been possible without the community’s support and collaboration.

Domtar’s land swap agreement with the City of Kingsport now allows trucks to enter and exit the mill’s new

shipping and receiving hub directly via Interstate 26, which runs past the mill. This alleviates heavy truck traffic downtown and eliminates thousands of miles of annual wear and tear on city streets while greatly reducing noise pollution from truck traffic.

“Thanks to our world-class team and asset here in Kingsport, we’re supplying sustainable packaging grades to the independent corrugated community,” Henry says. “We are proud of our home here in Kingsport and look forward to continuing to be part of this community for many years to come.”

Kingsport Mayor Pat Shull said the project was made possible thanks to a great partnership between Domtar and community leaders.

“This project fits with the Kingsport spirit of working together,” he said. “You can’t think of Kingsport without thinking of our paper mill. It’s a great day to be in Kingsport.”

This article was originally published online by Domtar. ■

Sustainable, Cost-Effective and High-Quality Tissue with Hybrid Technology



Using the optimal combination of energy and fiber to produce a more sustainable product.

By Anna Boström Mora, Marketing Manager, Valmet Tissue

How can you use the optimal combination of energy and fiber to reduce the environmental impact of tissue production? In this article, we discuss what hybrid technology can offer in sustainability, cost-effectiveness and quality to achieve an optimal product.

One of the challenges when you want to start up a new tissue production line is selecting the appropriate technology for your requirements. To make the right decision, you need to understand the specific quality demands for your market and then decide on the product strategy. However, in today's competitive market, there are additional influential factors such as the importance of caring

for the environment by reducing emissions, the increasing demand for raw materials, and the recent rise in energy prices. How can a tissue producer consider all this and still be profitable? Valmet's hybrid technology* allows you to optimally meet a combination of targets.

Quality, Sustainability and Competitiveness

With hybrid technology, you can reduce the amount of fiber for the same volume because increasing your roll bulk equates to fiber savings. Increased roll bulk is achieved by creating higher sheet caliper for the same or lower basis weight, therefore roll bulk is inversely related

to roll density; as roll bulk increases, the density of fibers decreases. The product strategy optimizes product specifications and operating costs. You can reduce the length, lower the basis weight and work with product quality. And the beauty of it is that you don't have to choose one or the other — options can be combined.

However, before a decision is made, we have to consider that each region has a different product strategy. A quick overview of toilet tissue in different regions reveals the following:

With a hybrid machine, it's possible to produce a bulky product with fewer plies yet at an equal or higher level of softness. As always, the trade-off is between bulk, softness and tensile strength.

North America. TAD/structured products have been developed mainly in North America, where the basis weight has been increasing over time, typically above 22 gsm, with only two plies. This combines softness with more fiber per ply and fewer plies than in conventional products worldwide for an increased roll bulk. It also generates better machine efficiency during production.

South America. In Brazil, the required length on the market is either 20 or 30 meters. With a bulkier product produced with a hybrid machine, for example, there is an opportunity to produce a two-ply instead of a three-ply product and still achieve a length of 20 meters and make huge fiber savings. It is also possible to migrate your conventional economy two-ply product to a premium product — still two-ply and the same length, but softer and with less fiber.

Europe. In Europe, private labels are strong and dictate the market. 15-20 gsm and ply are important. But is the number of plies good for production efficiency and sustainability? Probably not!

Asia. Dominant in the facial market, surface softness is more important than bulk in Asia. 15 gsm or lower is the standard basis weight, utilizing more plies to increase product quality. The trend is to move to structured products of higher quality with a decreased ply strategy instead.



Jenny Lahti-Samuelsson,
Vice President,
Tissue Mills Sales,
Valmet

TISSUE SPEAK

There's a lot of information to digest when deciding which tissue machine to invest in. We asked Jenny Lahti-Samuelsson, Vice President, Tissue Mills Sales, Valmet, to briefly comment on the words we so often use in connection with tissue production. With hybrid in mind, this is her summary:

Length

With hybrid technology, reduced length is easily achieved for the same volume, which can create the perception of a premium bulk product among consumers.

Diameter

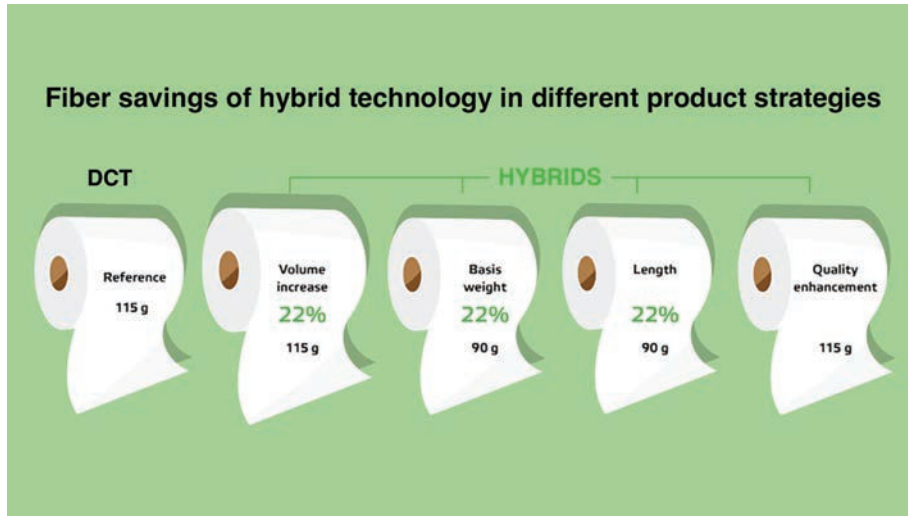
The consumers feel they are getting more value for the product, even if the amount of fiber is the same. TAD products in the US usually have a larger diameter. With hybrid technology, you can match that size.

Basis weight

The weight of fibers per area is the easiest way for the producer and consumer to refer to fiber saving. With a lower basis weight in the product but still the same volume, the consumer will experience better conformability in a bulkier product.

Quality

Higher quality enables a higher end product price. In the US, for example, the price of TAD quality is more than twice that of conventional products. Producers can achieve more profit with less fiber use per case.



Shifting to the Premium Segment

Sustainable production efficiency can be achieved with fewer plies / reduced total basis weight. For example, with a hybrid machine, it's possible to produce a bulky product with fewer plies yet at an equal or higher level of softness. As always, the trade-off is between bulk, softness and tensile strength.

Comparing the average conventional and hybrid numbers, you can reduce the basis weight for a hybrid bath tissue product at higher caliper and comparable tensile levels. Hybrids have better fiber

efficiency, resulting in higher roll bulk with a better quality output. The end product will have almost 30 percent more roll bulk than a conventional embossed product, which means an average of around 22 percent less fibers with up to 10 percent better softness quality.

Moving on to towels, a global look reveals that a hybrid towel — even taking into account the smaller property gap for a heavier embossed kitchen towel product — will have less fibers with more caliper, generating an average of 44 percent more water absorption than

in a similar conventional product. The roll geometries are comparable, but with 12 percent less fiber at higher quality.

With hybrids, you can migrate your light dry creped product from the value segment to the premium or ultra-premium levels. Reducing fiber consumption with more roll bulk provides the end product with a lighter basis weight and fewer sheet counts (reduced roll length), but still at a higher quality.

The beauty is that you don't have to choose one or the other — the options can be combined.

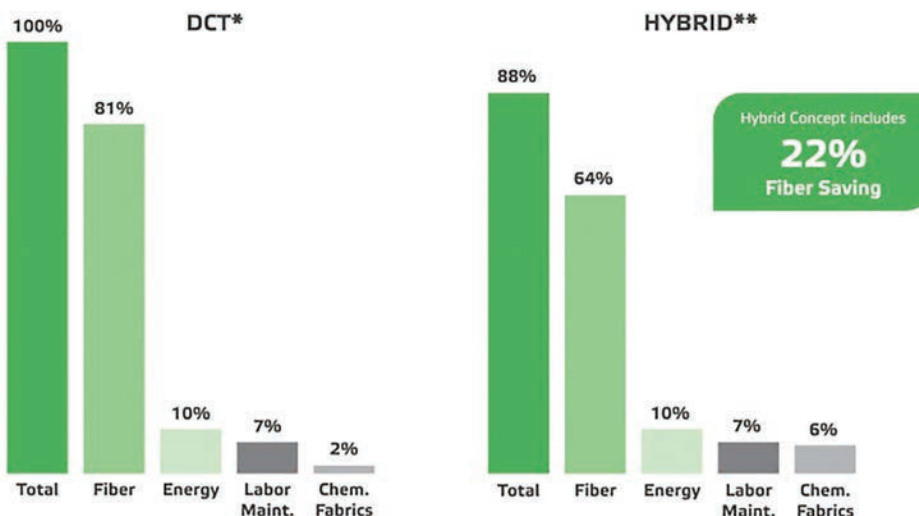
What about the environmental footprint of production on hybrid machines? In our studies, we have compared the fiber, water and carbon footprints with an average conventional reference bath tissue product of 115 grams. In the roll case, we can decrease fiber use by 22 percent, resulting in a reduction of carbon emissions at equal water use compared to the DCT case.

Achieving the Ideal Combination

If you want to move closer to the premium quality level, transferring a conventional machine to a hybrid concept results in a softer and more water-absorbent product. More than this, you will have lower variable operating costs for a roll or case. And with less fiber and less energy, you'll have a more sustainable product. ■

NOTE:

*Valmet hybrid technologies consists of the Valmet Advantage™ NTT®, Advantage™ QRT® and Advantage™ eTAD™ technology. All numbers listed on this article are related to an average for all 3 machine technologies.



Anna Boström Mora is Marketing Manager, Valmet Tissue at Valmet.

NPTA Recognizes Greg Gibson of Sylvamo with 2023 Stanley O. Styles Industry Excellence Award

The National Paper Trade Association (NPTA) is pleased to present the 2023 Stanley O. Styles Industry Excellence Award to Greg Gibson, senior vice president of Sylvamo. Greg's knowledge of customers, experience in both printing paper and packaging grades, and his selfless dedication to the industry has been evident throughout his career.

The Stanley O. Styles Industry Excellence Award was created to recognize individuals who have made a positive impact through innovation, hard work and effective management.

Greg will be presented with the award at Paper Meets LIVE! 2023, which takes place Sept. 19-21 at the Opal Sands Resort in Clearwater Beach, Florida. The award ceremony will be held during the event's Annual Luncheon on Wednesday, Sept. 21.

"When I would see Greg at industry events, he was the individual who went out of his way to say 'hi', reconnect, check in on our company and make me, as well as anyone I was with, feel a part of this industry," said Travis Mlakar of The Millcraft Paper Company. "Greg has also been one of the key leaders who has always prioritized what the industry needed and ensured that he and the organization



Greg's outstanding leadership, exceptional industry knowledge, and commitment to the industry set him apart. — NPTA.

he was a part of were there to support the greater good."

Greg's outstanding leadership, exceptional industry knowledge, and commitment to the industry set him apart. He became Sylvamo's senior vice president of commercial excellence on July 1, 2023.

A part of the paper and packaging industry since 1982, Greg joined International Paper in 2000 through the company's merger with Champion

International. He served as vice president and general manager for multiple International Paper commercial divisions, including Commercial Printing and Imaging papers, European Papers, European Packaging, and North American Papers.

At the inception of Sylvamo as a spinoff of International Paper in 2021, he became senior vice president and general manager, North America.

Headquartered in Memphis, Tennessee, Sylvamo employs more than 6,500 people worldwide, with mills in Europe, Latin America and North America.

"I have had the pleasure of working with Greg for more than 20 years," said Andrew Wallach, President and CEO, Central National Gottesman. "Greg has been an incredible steward of the paper industry, always has exceptional business insights, and manages his relationships with the highest level of integrity, transparency, and care. Greg is the consummate professional and very deserving of this award."

Greg has served on numerous boards including American Forest & Paper Association, Confederation of European Paper Industries and United Way of the Mid-South. ■

A History of Forming Systems for Packaging Grades of Paper

By Charles Pound, Product Line Manager - Forming Capital, Kadant Solutions

For years, papermakers have looked for the best combination of drainage and formation in the early section of fourdrinier paper machines. The ability to maximize drainage without sealing the sheet and to control sheet activity over a wide range of basis weights have been challenges with increasing machine speeds and customer quality demands.

In the early days, the papermaker could only physically change conventional foil blades with different angles to affect the drainage / formation relationship. This balancing act, when draining too aggressively sealed the sheet and harmed formation opposed to draining too slowly which hurt couch consistency and production was an operating compromise. Changing blades also caused safety concerns for both personnel and equipment on wide, fast machines.

Changing foil blades was followed by a succession of new straight angle blade shapes to improve the energy (activity) put into the sheet slurry. The energy imparted by these blades is speed dependent, which over a wide basis weight range, again, required the papermaker to change them as they had with standard foils.

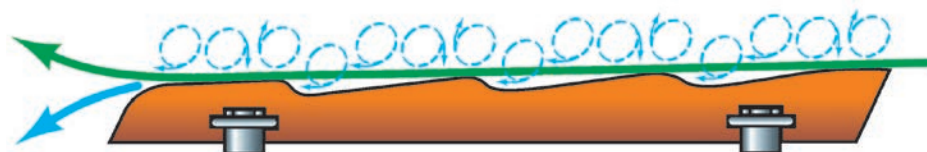
D Forming Technology

The next development to control drainage and activity came with the introduction of the

VID™ (Velocity Induced Drainage) forming technology concept. The VID forming technology blade shape differed from previous blades by using curved surfaces (like an airfoil) to cause water to be intermittently pulled below the wire for drainage and re-injected into the sheet to re-fluidize the fiber slurry on top of the wire and improve formation. The curved shape of the blade surface was substantially more efficient than straight angle surfaces of standard foils causing the water to follow the blade surface in a controllable manner.

This controlled drainage and fluidization prevents sheet sealing and improves formation, but as the name implies, it is still velocity dependent. To utilize VID forming technology over a wide speed range without the need to change blades, structures with blades that are movable in both vertical and angular planes were developed. Automating the VID forming technology structure, so it is controlled by the mill's DCS as speed varies is critical to optimal performance but requires a commitment to preventative maintenance in a harsh environment.

Following VID forming technology was the development of the Deltaflo, iL-Table® and others adjustable fourdrinier technology around 2006. This technology consists of many foil blades and wear surfaces moved by numerous electric motors and produces a wire pulsation dependent on wire speed.



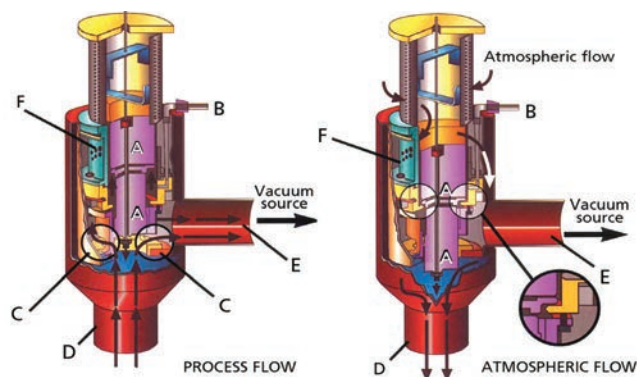
The VID (Velocity Induced Drainage) forming technology blade shape differed from previous blades by using curved surfaces (like an airfoil) to cause water to be intermittently pulled below the wire for drainage and re-injected into the sheet to re-fluidize the fiber slurry on top of the wire and improve formation.

V1000™ Vacuum Control Valve

Air is regulated (B) between two diaphragms (A), creating a force imbalance causing piston assembly to float upward, uncovering slots in lower sleeve (C).

Slots let air flow from regulated vacuum chamber (D) to high vacuum header (E).

Regulated vacuum chamber reaches set-point vacuum and the piston assembly is in a force-balance equilibrium.



High-Resolution™ Forming System

Papermakers have realized the value of adjustable table elements in drainage and formation, but the most advanced equipment available since the turn of the century has been expensive, complicated, and maintenance intensive.

Kadant Solutions took a new approach in 2013 to control the formation zone of the table. Working with a mill producing linerboard at speeds ranging from 1,800 to 3,200 feet per minute, we evaluated the pros and cons of existing equipment and systems to develop a new solution utilizing a combination of proven components.

The result was the High-Resolution forming system. The High-Resolution forming system uses high capacity, multi-compartment, low vacuum augmented drainage structures following the forming board that employs stepfoil forming blades with extremely accurate vacuum control.

The multiple vacuum zones in the structures allow precisely graduated vacuum control for each grade produced eliminating sheet sealing, while the positive, variable pressure pulses created by the stepfoil forming blades improve sheet formation. The High-Resolution forming system has no moving parts near the machine. Sheet activity is vacuum dependent; not speed or blade shape dependent.

When lightweight grades are produced at high speed, the vacuum in the structures is reduced to extremely low levels (0 – 2" water) reducing the catenary deflection of the wire between blades.

This reduces the energy imparted into the sheet. Drainage in this mode approximates low angle gravity foils. When basis weights are increased, the need for drainage and activity increases as well. By controlling increased vacuum levels in the compartments and the wire catenary, the resultant drainage and formation increases without sheet sealing.

Key Components of the High-Resolution Forming System

- The off-machine V-1000™ vacuum control valves are self-contained. Force balanced controllers that react instantly to small vacuum changes to maintain the precise (+/- 0.25 inches of water) vacuum levels needed. Operating in a user-friendly environment away from the fourdrinier wet end, the maintenance of these valves is simple, reliable, and safe with the machine running.
- The use of stepfoil forming blades is the second component of this system. These ceramic tipped blades have a secondary pressure pulse which is dependent on the gap between the wire and the step of the blade. As vacuum increases (heavier weights), the wire deflects closer to the blade and the pulse amplitude increases to improve activity, formation, and drainage. Further, with a larger wire catenary, inertia carries the water through the wire to be doctored off by the lead edge of the subsequent blade.
- The third component of the system is the high capacity, multi-compartment

design of the structures located immediately following the forming board where the amount of water removed may be very large. To handle the water volume, the High-Resolution forming system uses structures with full width integral J-legs.

There are no wet end moving parts for maximum reliability and personnel safety.

Results

The High-Resolution forming system has successfully been in operation since 2013 on a linerboard machine producing 31 lb. to 96 lb. (per thousand sq. ft.) board at speeds up to 3,200 feet per minute. Multiple world production records for a flat fourdrinier machine have been set — most recently a record 1,870 tons in 24 hours was achieved with 226-inch trim on 69 lb. liner.

In addition, better sheet activity control has improved formation allowing press load increases and substantial steam savings as well as higher calendar loading and sheet smoothness along with improved primary table cleanliness. This initial installation has been followed by additional packaging grade installations all with similar quality and production improvements.

Note: iTable is a registered mark of IBS of America Corporation. Kadant Inc. and its subsidiaries are not affiliated with or sponsored by IBS. ■

Charles Pound is Product Line Manager – Forming Capital at Kadant Solutions.

Tissue Production – Make It Safe!

Keeping operators safe while maximizing the efficiencies of tissue machines is a complex equation.

By Thomas Nager, Machine Safety Expert, ANDRITZ



Thomas Nager, Machine Safety Expert, ANDRITZ.

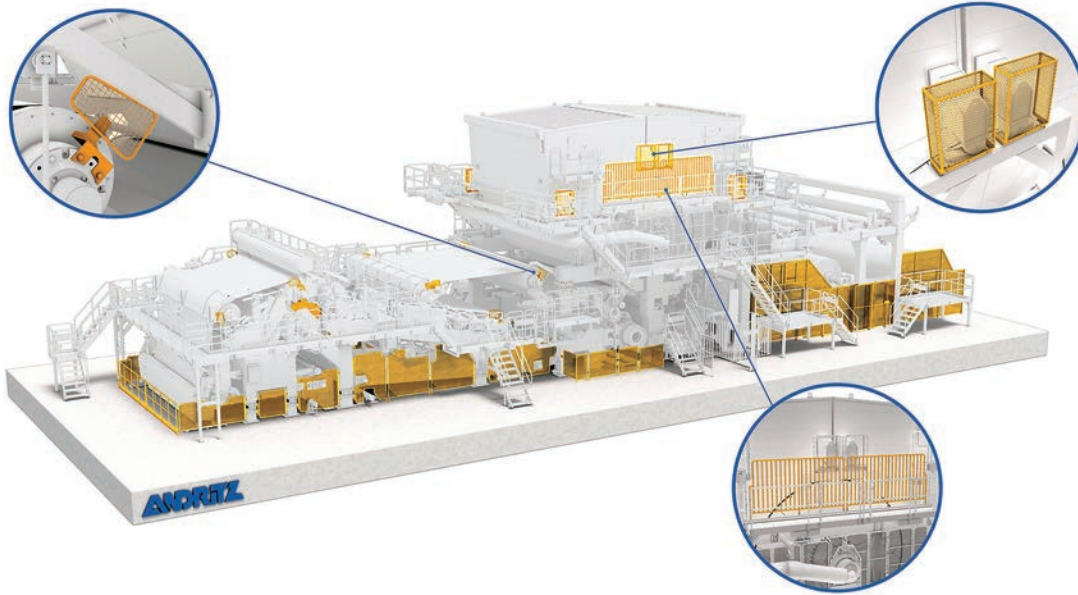
Avoiding accidents and unplanned downtime through the highest safety standards is one of the foundations of today's high-speed tissue production. The industry's safety measures and concepts already went hand in hand with the constant increase of machine performance and capacities.

Nevertheless, this part of the tissue production process is subject to great dynamics, as not only technologies evolve, but also awareness of the importance of safety increases and the regulatory framework changes. In addition, the understanding and interpreting of the guidelines often varies by country and by supplier.

"Safety is quite a complex area for us as machine suppliers," says Thomas Nager, Machine Safety Expert, ANDRITZ, "On the one hand we want to supply the safest tissue machines on the market, however on the other hand we also want them to be the most productive machines when it comes to ease of operation. We try to live a culture that combines those two, often remarkably divergent, topics."

"The first and most fundamental of our principles when supplying tissue technology is that obviously we don't want any operators to be hurt," continues Nager, "The second is reliability and machine performance, and third on the list is regulations and legal requirements."

"Currently, European safety standards are the most detailed for tissue making and finishing machines. The basis for ANDRITZ machines is the risk assessment in combination with the standards. For the European market, additionally, the Machine Directive, as well as the Electro-magnetic Compatibility Directive (EMC), Low Voltage Directive (LVD) and Pressure Equipment Directive (PED) and their harmonized standards must be fulfilled. Products in compliance



There are three areas ANDRITZ concentrates on to ensure all parameters are covered when it comes to machine safety and maximum usability: (1) An inherently safe design — “safety by design,” (2) Guards and fences where interaction is not necessary during operation, and (3) Functional safety where interaction is necessary during operation.

with these directives are identified by the CE mark (Conformité Européenne) which signifies, that the products sold have been assessed to meet the legal requirements for health and safety.”

ANDRITZ communicates with the customer already in the sales phase about the implications of the risk assessment and the most advantageous route to take.

“There are always discussions early on about the CE mark for the European market, and whether, for instance, the whole plant must have a CE mark, or individual machines only. As an example, a tissue machine needs a CE mark of its own, as does a pressure vessel such as a Yankee. ANDRITZ’s advice is to have individual CE marks, as updating in the future tends to be easier and more flexible than with a mark covering the whole plant, even it is not necessary according to the machine directive,” explains Nager.

In addition to CE markings on new supplied machines, ANDRITZ provides audits on older machines to ensure, that these machines comply with the current regulations. Furthermore, safety advice will be issued if it comes to

major rebuild projects.

Other countries and regions also have their own conformity markings including the USA and Canada (e.g. UL for electrical components), China (e.g. CCC) and Russia and Eurasia (e.g. EAC).

“Of course, all additional requirements in any given country or region will be respected and taken into account when delivering ANDRITZ tissue machines,” adds Nager.

Under the European Machine Directive, which is the legal basis for machine safety in Europe, every machine that is placed on the market must have a risk assessment which is the core tool to ensure that safety has been seriously taken into account. This means identifying where any hazard areas may occur and taking defined steps to make those areas safe.

“This is not simply a case of ticking boxes,” says Nager. “This really is about reducing risks in the work environment, often in tight spaces. For example, it is quite common in the tissue industry for space to be a problem, and squeezing a machine into a tight area. If this happens, it is particularly challenging that people

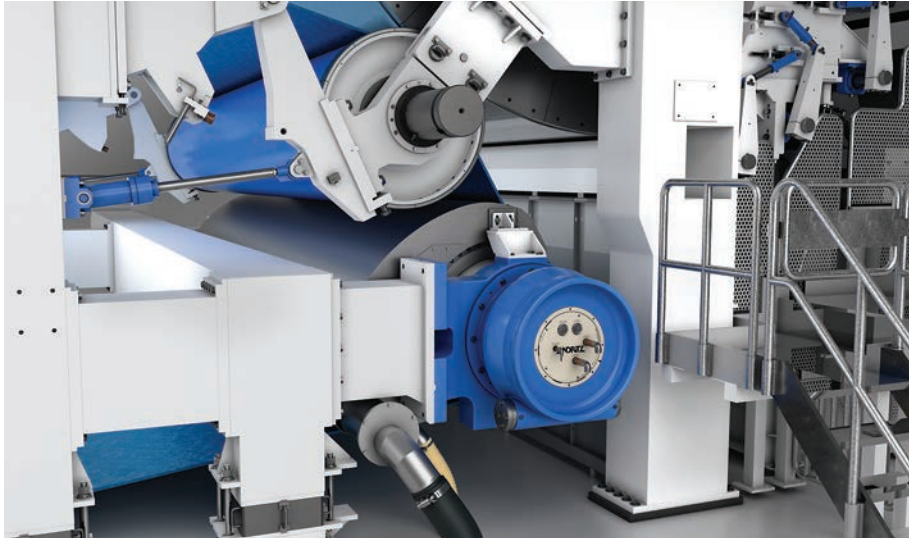
are kept at a safe distance away from the hazardous areas.

“We are working closely with our customers to improve the safety of their tissue production process, for example: Which safety elements need to be eliminated or by-passed; which kind of smart solutions can we offer or develop conjointly to create a safe environment?”

THE ABC OF SAFETY ON ANDRITZ TISSUE MACHINES

The risk assessment ensures that nothing is left out or forgotten when it comes to all aspects of safety on tissue machines. ANDRITZ realizes this with its high competence in various fields, fully understanding the mechanical demands and with all process know-how in house. This involves making a list of all important factors relating to risk on a tissue machine and defining measures how to mitigate these risks.

“These standards are split into A-, B-, and C-standards” explains Nager. “A-standards are general safety related standards, such as ISO 12100 which defines what a risk assessment must contain; B-standards are more precise,



Fully cantilevered shoe press for safety and efficiency.

related to different types of risk and C-standards which break the safety topic down to individual components such as tissue making equipment. This is complex and difficult to do, however this long list ensures that every area is covered, and no part of the machine or process is left out or forgotten.”

But essentially making tissue machines safe is not all about lists and standards. Ultimately, the aim is to identify any risk area and make it as safe as possible while at the same time allowing full and maximum efficiency of production to take place. This is where ANDRITZ expertise comes into its own.

GETTING DOWN TO BASICS

There are three areas ANDRITZ concentrates on to ensure all parameters are covered when it comes to machine safety and maximum usability:

- An inherently safe design – “safety by design”
- Guards and fences where interaction is not necessary during operation
- Functional safety where interaction is necessary during operation

Nager says, “The basic approach to making tissue machines safe is that first of all we try to avoid a hazard location altogether, for example by avoiding the interaction between human and machine. This is making the machine inherently safe.

“However, we all know that tissue production is a labor-intensive activity and it’s not possible to avoid hazardous areas completely. This means, that dangerous areas, for instance roll nips, must have nip guards, and other areas need a fence to avoid operators getting too close. We have also carried out a lot of work on the design of machines at ANDRITZ where the operator is able to avoid a hazardous area altogether by being able to carry out a task without entering a hazardous zone, for example by being able to pull out a lubrication point on the machine.”

The third area is the important one of functional safety where interaction is necessary during operation, quite common when operators need to check the quality of the tissue being produced.

Nager says, “The reel section is where operators always like to go in and touch and feel the quality of the paper being produced. For this

case, ANDRITZ has designed certain movements and interlocks within the machine where it is possible, to enter the reel section at given intervals and perform tasks safely. Another example I would like to point out is our fully cantilevered shoe press concept, which allows for faster felt and shoe press belt changes while greatly increasing the safety of this process.

“It must be noted that functional safety, although an important asset, is costly at the outset and has to be maintained on a regular basis.”

The subject of safety while carrying out cleaning and maintenance tasks is also an important factor, particularly in tissue making.

“Both cleaning and maintenance are very relevant areas when it comes to safety of operation,” says Nager. “Tissue production requires a high level of cleaning. We have focused our efforts in making sure that not only areas of the machine are more accessible for cleaning and maintenance, but we also have specially designed CE marked lifting equipment to avoid any accidents or injuries during maintenance such as roll changes.”

FUTURE CHALLENGES

Safety and the attitude toward safety have come a long way in the last decades. However, there is still work to be done when it comes to regional approaches to safety.

“Improvements in safety have increased over the last 25 years, ‘common sense’ used to be an integral part of the safety concept,” says Nager. “Now safety relies much more on the machine to keep people safe, in a way to take out the human element, and safety engineers are working more and more to prevent operators from manipulating the safety measures put in place, for instance disabling guards to make the job easier.” ■

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Smithers Forecasts Further Growth for \$60.4 Billion Folding Carton Packaging Market

Sustainability demands will push further growth in sales of cartonboard, microflute and miniflute packaging, according to the latest data from Smithers. In 2023, actual consumption of these paperboard formats will reach a projected 56.8 million tons worldwide, up from 47.8 million tons in 2019.

Exclusive forecasting available to purchase now from Smithers, in its latest market report — The Future of Folding Cartons to 2028 — shows this will reach 77.3 million tons in 2028, equivalent to a compound annual growth rate (CAGR) of +6.4%.

Across the same period value of cartonboard will increase from \$60.4 billion to \$79.7 billion (at constant prices), equivalent to a CAGR of +5.7%. The global value of converted folding carton packaging will reach \$199.0 billion in 2023; and then increase to \$274.5 billion in 2028.

Analysis of the 24 end-use applications included in Smithers' extensive data set, reveals folding carton use will remain fairly evenly split between food and beverage, and other applications. Much new growth is coming from evolving existing paper technologies to replace plastics, supported by legislation, such as the forthcoming revision of the Packaging and Packaging Waste Directive in Europe. This includes new formats in fresh produce, food service, beverage multipacks, ready meals, home, and personal care.

The fastest growing sectors across the next five years will be dry foods, confectionary, healthcare, personal care, and chilled food. Acceptance in several of these is conditional on deploying improved coating technology



The fastest growing sectors across the next five years will be dry foods, confectionary, healthcare, personal care, and chilled food.

to protect fibers from wet or fatty foods, and present a premium print surface. Smithers estimates that nearly 70% of all cartonboard packaging carries a coating of some form. In 2023, 90% of these coatings by weight are thermoplastic polymers or aluminum, and there is a premium to develop for functional coatings that do not compromise fiber recyclability. Paper mills are taking steps to upgrade machines to enable or improve inline coating on the paper machine to meet the growing demand for these types of coated cartonboard.

Luxury packaging remains a major target for many suppliers, with new premium grades entering the market combining superior print surfaces, with greater recyclability credentials. This is stimulating greater demand for virgin pulp cartonboards. Simultaneously there is an impetus to add

smart tracking technology to folding cartons giving greater supply chain insight and protecting high-value goods against counterfeiting.

The market is also having to negotiate price disruption. Raw material prices rose by over 25% in 2022 following a 14% increase in 2021. In the short-term, this is creating a febrile marketplace, even as new folding carton assets come online. A total of over six million tons of production capacity entered the market between 2020 and 2022, which gives a global installed capacity in 2022 of over 59 million tons, providing a buffer of some five million tons.

Paper mills, especially in Europe, are increasingly investing in more energy-efficient equipment and even trialing alternative pulp supplies. This is reflected in an increased consumption of uncoated recycled board (URB); although coated recycled board (CRB)/white-lined chipboard (WLC) and folding boxboard (FBB) will continue to represent the majority of the market.

Booming demand for dedicated e-commerce formats has translated into an acceleration of demand for microflute packaging, featuring a litho-laminated outer layer of cartonboard applied to the single-face corrugated under-layers. Over time it is anticipated that some of this cartonboard market will be eroded by the use of linerboard, thereby removing the need for a separate lamination process.

Founded in 1925 and headquartered in Akron, Ohio, Smithers is a multinational provider of testing, consulting, information, and compliance services with laboratories and operations in North America, Europe, and Asia. ■

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