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Rightsizing the Paper Packaging Industry

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

For a number of years now, we've all heard the term "rightsizing" when it comes to making paper-based packaging more efficient. But in the past 10 months, it's starting to look as if the packaging industry is rightsizing itself in terms of the individual components getting bigger not smaller.

Let's start off with the combination of Smurfit Kappa and WestRock, because this is very close to being a done deal with completion expected in early-July. In a nutshell, Smurfit Kappa is buying WestRock for around \$11.2 billion. Shareholders of both companies have approved the merger and European regulators have given it the green light.

Smurfit WestRock will be one of the largest packaging companies in the world, with the capacity to produce about 23 million tons per year of board and packaging grades of paper — WestRock at about 14 million tons and Smurfit Kappa at 9.1 million tons. All of that production would come from about 67 mills, feeding around 500 converting operations.

Next is an interesting deal (to say the least) that involves International Paper, DS Smith, Suzano and, early-on, Mondi. In chronological order: Mondi (UK) in March made an offer to acquire DS Smith (UK) for \$6.75 billion. The two companies had agreed in principle to terms, until IP in April jumped into the mix with a proposal to buy DS Smith for \$7.2 billion. Mondi decided not to up the ante and stepped away a few days later.

You think, 'hmmm, that was kind of interesting, what's next?' Apparently, the unexpected. In early-March, some of the big international news agencies began reporting that Brazil's Suzano had "communicated" an offer to IP of \$42 per

share (about \$15 billion) to buy the Memphis-based company.

In response, IP on May 7 said, "Consistent with its standing practice, International Paper offers no comment on rumors or speculation contained in recent media reports. ...The company is also focused on completing its previously announced combination with DS Smith, which offers a unique and highly compelling opportunity to create significant shareholder value above its base plan."

Industry analysts pointed out that if in fact Suzano had floated a verbal offer of \$42 per share for IP, it was, in their opinion, inadequate.

After a brief lull in the storm, so to speak, Bloomberg, citing "people familiar with the matter," on May 23 reported that Suzano is exploring further financing options for the possibility of increasing its offer for IP.

As of my writing of this column (mid-June), nothing concrete has taken place between Suzano and IP.

However, Suzano did publish a written statement on May 22 confirming its interest in IP. In part, Suzano said, "...the Company confirms its interest in International Paper assets. However, it reiterates that, up to the moment, there is no agreement, binding or otherwise, nor any decision or deliberation by the Company's management regarding a potential operation that meets the minimum materiality required to qualify as a material fact."

No matter what transpires in the coming weeks and months, things are getting very interesting in the paper industry.

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OEM Expertise Facing knowledge transfer issues at your mill?



For many years, professionals have been warned of a forthcoming change caused by a dramatic shift in workplace demographics. This generational gap is particularly concerning to the pulp, paper, and manufacturing industries, where the aging workforce results in a need for succession planning and managing the loss of that expert knowledge. One factor often overlooked when addressing the aging workforce is that an Original Equipment Manufacturer (OEM) has a collection of experience with legacy information right at its fingertips. OEMs like Valmet can ease this transition and modernize these relationships in the industry—whether they include the equipment owner, trade organizations, employees, students, or new hires.

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FORWARD

NORTH AMERICA

Twin Rivers Paper Sells Pine Bluff Mill to American Kraft Paper Industries

Twin Rivers Paper Company at the end of April announced the sale of its Pine Bluff, Arkansas, unbleached kraft paper mill to American Kraft Paper Industries, an affiliate of global industrial group American Industrial Acquisition Corporation (AIAC).

Terms of the deal were not disclosed.

Twin Rivers Paper acquired the Pine Bluff kraft paper manufacturing and distribution business from the Mondi Group in 2018. In the six years since acquisition, Twin Rivers invested substantially in the Pine Bluff mill to enhance production efficiency and capacity while expanding its product offering.

“The decision to sell the Pine Bluff mill furthers Twin Rivers’ strategy of prioritizing



the growth of our core specialty papers business,” stated Tyler Rajeski, President of Twin Rivers Paper. “With AIAC’s founding principle of investing in the assets it acquires, we are confident the Pine Bluff business and its dedicated managers and employees will realize long-term success.”

L. M. Levie, AIAC Chairman, commented,

“This highly strategic acquisition allows us to substantially expand our production and distribution of a broad range of unbleached Kraft paper. The Pine Bluff business, now known as American Kraft Paper Industries, will collaborate with AIAC’s Canadian Kraft Paper Industries, located in The Pas, Manitoba, permitting us to better serve our domestic and international packaging industry customers with superior speed, quality, reliability, and efficiency.”

The Pine Bluff Mill has one paper machine — PM No. 1 — with the capacity to produce 140,000 tpy of Sack Kraft Paper. The mill, which employs about 200 people, also has an on-site wood yard and pulp mill.

Billerud Will Not Proceed with Plans to Convert Escanaba Mill Production to Cartonboard

Billerud’s Board of Directors has decided to not proceed with plans to convert its Escanaba mill in Michigan to cartonboard production. Instead, the company will target to shift its product mix gradually towards packaging materials in North America with a moderate investment level.

Currently, the Escanaba Mill has the capacity to produce 660,000 tons per year of coated sheets, coated web, coated digital and inkjet, and label paper. The mill’s 2,000-acre site has a kraft pulp mill, a refiner mechanical pulp mill, three paper machines, a pulp dryer, three off-machine blade coaters, six supercalenders and six winders.

“After in-depth feasibility studies, evaluations, and supplier discussions, we have concluded that the projected return on investment is not sufficiently attractive to proceed with the conversion of Escanaba to cartonboard production,” said Ivar Vatne, President and CEO of Billerud.

Billerud began a feasibility study in the latter part of 2022 to examine the potential of converting the Escanaba mill to the



production of cartonboard. On January 31, 2023, Michigan Governor Gretchen Whitmer signed legislation approving the Michigan Economic Development Corporation’s (MEDC) appropriation of up to \$200 million in funding to support the company’s plans to convert the mill.

Vatne continued, “During the process, conditions have changed and the cost of equipment and services necessary to transform the operations have greatly increased. Instead, we will pursue a higher returning and more moderate investment

strategy for our North American mills going forward.

“The long-term market outlook for paper and packaging material in North America is promising. With better-than-expected machine flexibility we see great potential to diversify our product portfolio towards packaging grades — fully in line with our strategy,” Vatne concluded.

Billerud said that it will continue to serve the North American markets with its high quality cartonboard produced at its European mills.



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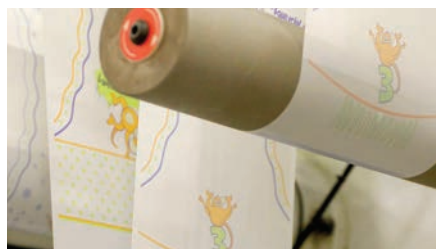
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NORTH AMERICA

First Quality Announces \$418 Million Expansion at Macon Facility

First Quality announced a \$418 million expansion will take place at its manufacturing facility in Macon, Georgia, for the production of baby diapers and training pants. The expansion will create 600 new jobs and increase capacity for diapers and training pants by 50%.

“In March, First Quality announced that we will be increasing our baby diaper and training pant manufacturing capacity by 50 percent, and we are excited to announce our expansion will take place in Macon,” said Allen Bodford, President of First Quality’s Absorbent Hygiene division. “This expansion is a testament to First Quality’s innovative



products and continuing commitment to the baby diaper market.”

First Quality has been part of the Macon community since 2008. The Macon facility manufactures diapers, youth and training pants for retail and healthcare channels.

The expanded facilities will be located

at 2108 Avondale Mill Road, adjacent to First Quality’s current location in Macon. The company will be hiring for executive, administrative, supervisory, and production positions. Job opportunities will be posted to the First Quality careers site as they are available.

Macon-Bibb Mayor Lester Miller, stated, “First Quality has been a strong member of Team Macon-Bibb for many years. We are proud to stand with them as they invest millions in new infrastructure in our community, meaning hundreds of jobs will be retained and hundreds more created.”

ND Paper Acquires Water Quality Center in Wisconsin Rapids from Billerud

ND Paper and Billerud Wisconsin LLC on April 30 closed on an Asset Purchase Agreement, whereas ND Paper will own and operate Billerud’s Water Quality Center and associated landfill and F&E landfill assets in Wisconsin Rapids.

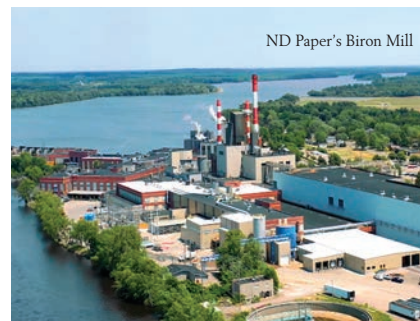
Terms of the deal were not disclosed.

The Water Quality Center is an essential component of ND Paper’s Biron pulp and paper mill, which is situated a few miles east

on the Wisconsin River.

In a press release, ND Paper said, “The agreement ensures the mill’s uninterrupted production and ND Paper’s Biron facility will remain an integral part of the Wisconsin Rapids community.”

ND Paper noted that five employees are responsible for operating the water facility and will be joining the ND Paper team.



Irving Pulp & Paper \$1.1 Billion Upgrade for Saint John Pulp Mill

Irving Pulp & Paper has submitted a preliminary application to undertake a major upgrade to its pulp mill in Saint John, New Brunswick, Canada, representing a new long-term capital improvement plan and a potential \$1.1 billion investment.

Known as NextGen, the project would take place over a four-year period and will increase the mill’s capacity while also increasing the green energy it generates.

“These upgrades will ensure Saint John’s pulp mill continues to be at the heart of the province’s forest products supply chain, and provides a regional



market for chips, bark and pulpwood,” said Mark Mosher, Vice President at Irving Pulp & Paper.

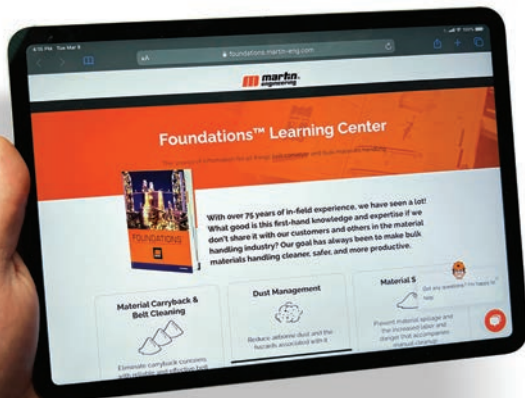
At the heart of the project is the construction of a new recovery boiler, which will replace the 1970s-era boiler. This project will increase production by approximately 66 percent and facilitate several new environmental upgrades to the historic mill.

An Environmental Impact Assessment (EIA) related to the project has been submitted to New Brunswick’s Department of Environment.

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NORTH AMERICA

Georgia-Pacific Investing Over \$150 Million to Rebuild Tissue Machine at Wauna Mill

Georgia-Pacific said that it will invest more than \$150 million to rebuild a paper machine at its tissue mill in Wauna, Oregon.

The investment will rebuild a 1965-vintage paper machine into a world-class machine to make paper for Angel Soft® and strategic private label bath tissue. This modernization project helps position the mill and the overall business to continue to be competitive in the market, GP said.

Engineering and related work has begun, and startup of the machine is scheduled for 2026.

“We are excited to invest in our market leading Angel Soft bath tissue and strategic



private label brands we support,” said Vivek Joshi, President of Georgia-Pacific’s retail tissue, towel and napkin business. “This investment will allow us to grow these brands and

continue to serve our loyal consumers with the great quality they have come to expect.”

Brian Solheim, the Wauna mill’s vice president - manufacturing, added, “This is a great investment in our Wauna team and in our community, making it an exciting time to be working at the Wauna mill. I am proud of the work our team members do every day to make this a safe, competitive and strategic location for our Consumer Products business.”

The Wauna mill currently employs more than 700 people. The mill produces retail bath tissue, paper towels and napkins. Employment is not expected to increase because of this investment, GP said.

West Fraser Completes Sale of Two Pulp Mills in Western Canada to Atlas Holdings

West Fraser Timber Co. in April completed the sale of its Quesnel River Pulp mill and Slave Lake Pulp mill to an affiliate of a fund managed by Atlas Holdings.

West Fraser first announced its intention to sell the two pulp mills to Atlas in September of 2023. At that time, West Fraser said the combined total cash proceeds from the sale are US\$120 million.

The mills will be operated by Millar Western Forest Products, which joined the global Atlas

family of manufacturing and distribution businesses in 2017.

“We would like to thank our dedicated employees for their many years of service to West Fraser and the communities of Quesnel and Slave Lake,” said Sean McLaren, President & CEO West Fraser. “The sale of these two pulp assets, along with the disposition of Hinton Pulp earlier this year, enables West Fraser to focus its resources on becoming the premier building products company in North America.”



Supremex Acquires Illinois-based Forest Envelope Group for \$1.8 Million

Supremex, a North American manufacturer of envelopes, announced the acquisition of the assets of Forest Envelope Group. Founded over 40 years ago, Forest Envelope is a regional leader in specialty envelope manufacturing and lithography located in Bolingbrook, Illinois, in the Greater Chicago area.

The transaction was concluded for a total consideration of approximately US\$1.8 million, on a cash-free and debt-free basis, subject to customary adjustments, financed through the Supremex’s existing credit facility.



“The acquisition of Forest Envelope is an excellent fit with our current operations in the U.S. Midwest region,” said Stewart Emerson, President and CEO of Supremex. “Forest Envelope has a solid reputation for providing high-quality products, top-tier

customer service and on-time delivery.

“Given its close proximity to our existing plants in Naperville and Chicago, we intend to integrate Forest Envelope’s activities into these facilities over the next 90 days.

“The transition should be seamless for customers and, in fact, provide them access to additional capacity and a significantly broader product offering. We expect this tuck-in operation to rapidly yield synergies within our U.S. Envelope network,” Emerson concluded.

NORTH AMERICA

Canfor Pulp Indefinitely Curtailing One Production Line at Northwood Pulp

Canfor Pulp Products in mid-May announced the indefinite curtailment of one production line at its Northwood facility in Prince George, British Columbia due to the decline in availability of economic fiber in the northern BC region. The curtailment will result in the reduction of approximately 300,000 tonnes of market kraft pulp annually.

“While the region has a substantive supply of sustainably grown timber, harvest levels are well below the Allowable Annual Cut partly due to natural disturbances, but increasingly because of the impact of a range of policy choices and regulatory complexity,” said Kevin Edgson, President and CEO, Canfor Pulp.

“The persistent shortage of economic fiber, particularly in the Prince George region, has led to the closure or curtailment of a number of sawmills, which in turn has dramatically reduced the volume of chips available to meet



the needs of our pulp operations. Despite exhaustive efforts, including expanding well beyond our traditional operating region, there is simply not enough residual fiber to supply the current production capacity of all our operations,” Edgson said.

Canfor Pulp currently operates two pulp production lines at its Northwood facility and one production line at its nearby Intercon facility. The company continued to operate both lines at Northwood over a few weeks following the announcement, then

is proceeding with an orderly wind-down process of one line at the beginning of the third quarter. This reduction in capacity will impact approximately 220 jobs across Canfor Pulp.

Edgson continued, “We are frustrated and disheartened to have to make this decision and know it has a significant impact on our employees, their families, local businesses and the community. We have set up a transition team and will work with our union to support our employees as we plan an orderly wind-down.”

With the reduction of one line at Northwood, Canfor Pulp will have total annual capacity of 480,000 tonnes of market pulp. Canfor Pulp’s Specialty Paper facility in Prince George will continue to operate with a total annual capacity of 140,000 tonnes of kraft paper.

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NORTH AMERICA

RYAM to Suspend Temiscaming High Purity Cellulose Plant Operations

Rayonier Advanced Materials (RYAM) announced that, effective July 2, it will suspend operations at its Temiscaming High Purity Cellulose (HPC) plant in Canada for an indefinite period.

The suspension will result in approximately 275 layoffs.

In a press release, RYAM said, “Given current market conditions and high capital and fixed costs associated with the HPC plant, this decision will help mitigate the plant’s ongoing operating losses and improve the company’s consolidated free cash flow. [This] announcement is aligned with the company’s focus on improving its balance sheet, leverage position and overall financial performance toward execution of its long-term growth strategy.”

The suspension, which will be carried out in a safe and environmentally sound manner,



will result in a reduction of RYAM’s annual global HPC production. The Temiscaming HPC facility has an annual production capacity of approximately 150,000 metric tons, with roughly 30 percent historically dedicated to specialty cellulose materials.

The company will be working directly with its customers to support their specialty cellulose needs in both the short- and long-term.

De Lyle Bloomquist, President and CEO

of RYAM, explained, “Persistent market weakness, uncertain availability of affordable wood fiber, and high capital and fixed costs have posed significant challenges for the Temiscaming HPC plant. This decision, which we do not take lightly, is made only after a rigorous strategic review in which multiple alternatives were thoroughly explored. We are mindful of the impact this will have on affected employees and will take appropriate measures to assist these employees in keeping with the collective agreement, RYAM values and applicable law.”

This decision does not affect RYAM’s paperboard and high-yield pulp plants located adjacent to the Temiscaming HPC plant. These two plants, which are part of an ongoing sales process announced last October, remain competitive and will continue to operate at full capacity, the company said.

SOUTH AMERICA

CMPC Intends to Build 2.5 Million TPY Pulp Mill in Rio Grande do Sul, Brazil

CMPC on April 29 signed an agreement with the State of Rio Grande do Sul (Brazil) on a protocol of intentions to move forward in the evaluation of a comprehensive project, which will include a new pulp mill, located 15 kilometers from the city of Barra do Ribeiro in Rio Grande do Sul.

The project, called Natureza, has an integral scope that combines industrialization, road and port infrastructure, sustainable associative forestry, conservation and cultural promotion, and involves the construction of a pulp mill with the capacity to produce up to 2.5 million tons per year of bleached short-fiber kraft pulp (BHKP) — with the possibility of subsequent expansion — in accordance with the highest world standards of environmental protection, efficiency and quality.

In line with the agreed protocol, CMPC

has submitted permit applications for various monitoring activities of the Fundacao Estadual de Protecao Ambiental Henrique Luis Roessler (FEPAM), a technical agency of the Rio Grande do Sul State Environmental Protection System. Thus, specialized teams will be able to carry out the technical studies and environmental assessments required for the final preparation of the industrial project which, if all permits and authorizations are obtained, will be submitted to CMPC Board of Directors in mid-2026.

If the project is approved, it would imply an investment of approximately US\$4 billion for the new pulp mill, in addition to US \$420 million in various road infrastructure works and US\$150 million for the development of a new port terminal in Rio Grande, as well as an expansion of the port terminal currently in use.



With headquarters in Chile, CMPC currently has operations in Brazil, Argentina, Uruguay, Mexico, Colombia, Peru and Ecuador.

EUROPE

Norske Skog to Enter Pulp Market with New Production Line at Saugbrugs

Norske Skog in June announced the start of a study to form the basis of building a bleached chemi-thermomechanical pulp (BCTMP) production line at its Saugbrugs mill in Halden, Norway.

The potential new pulp line is based on reutilizing a portion of the mill that housed PM6, which was heavily damaged during a rockslide that occurred in April of 2023. PM6, which had the capacity to produce 260,000 tonnes per year of SC (supercalendered) magazine paper, was shut down and remains idle.

In addition, Norske Skog said that part of the investment to build the new pulp line would be covered by the portion of the insurance settlement that has not yet been paid out by the insurance company, amounting to NOK 615 million, for the development of new business opportunities at the plant.

According to Norske Skog, the new BCTMP line will produce approximately 300,000 tons of pulp to meet the growing demand, especially for products in the packaging market. Saugbrugs has adequate access to green energy, and thus continue to deliver products with very low carbon footprint.

“Norske Skog will initiate a main study that will form the basis for a final board decision to build a BCTMP plant at Saugbrugs in Halden,” said Geir Drangslund, CEO of Norske Skog. “The net investment in BCTMP production will range between NOK 1.5 to 2 billion (EUR 140-180 million). The construction period is expected to last for two years starting in the second half of 2025.”

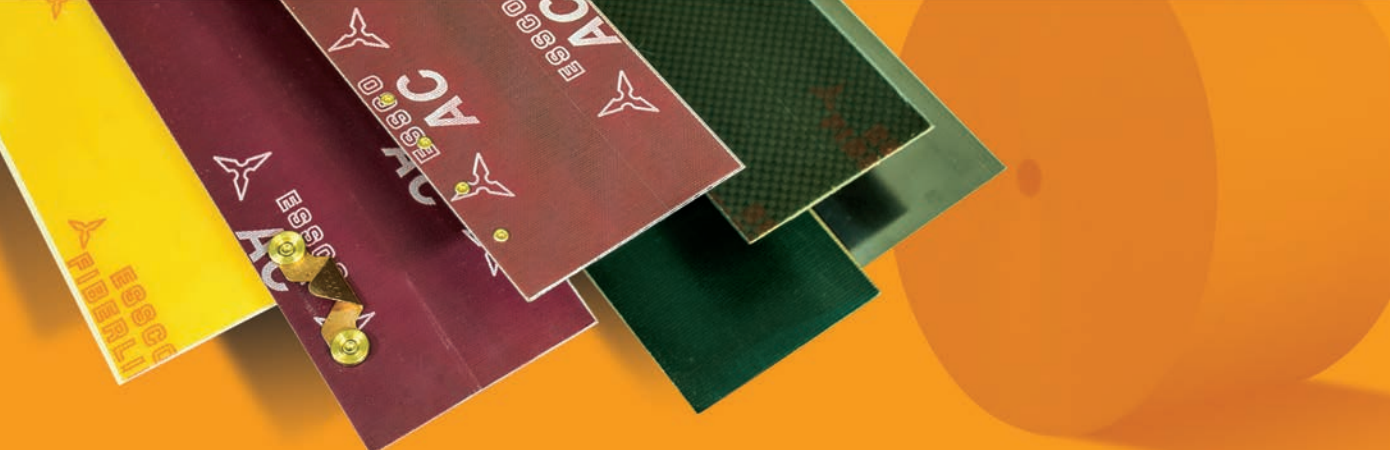
The BCTMP production will be based on fresh fiber, and the mill already has access to adequate energy capacity.

Norske Skog noted that the investment

will utilize existing machinery, equipment and infrastructure, reducing the total investment by approximately 50% compared to a pure greenfield investment case. There will be minor adjustments to the existing infrastructure such as in- and outbound distribution systems, raw material processing machinery and equipment, in addition to the wastewater treatment plant.

Final investment decisions are planned in the first half of 2025, and the start of BCTMP production is planned in the first half of 2027.

The Saugbrugs mill currently operates two paper machines for the production of SC paper: PM4 has the capacity to produce 100,000 tpy, and PM5 has the capacity to produce 100,000 tpy. Norske Skog emphasized that the Saugbrugs mill will continue to be a supplier of SC publication paper after the start of BCTMP production.



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EUROPE

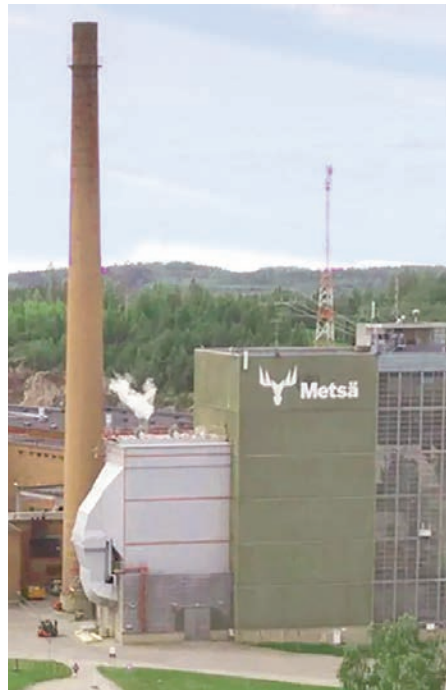
Metsä Board to Upgrade the FBB Machine at Simpele Mill in Finland

Metsä Board announced an investment decision to upgrade the folding boxboard (FBB) machine at its Simpele mill in South-east Finland.

The investment value is approximately EUR 60 million, divided over the period 2024-2026.

According to Metsä Board, the machine modernization project will improve the quality of folding boxboard and increase production efficiency. The investment also will enable the replacement of fossil fuels in paperboard production and supports Metsä Board's target of fossil free production at all its mills by the end of 2030.

"The renewal of the board machine is part of a wider investment program to modernize the Simpele board mill," explained Mika Joukio, CEO of Metsä Board. "This



investment will improve the quality of folding boxboard, meeting the strictest requirements, especially in food and pharmaceutical packaging.

"In addition, the investment will improve our cost competitiveness and enable almost entirely fossil free production at Simpele," Joukio added.

The modernization will increase the mill's production capacity by around 10,000 tonnes, which will bring the annual production capacity of Simpele folding boxboard to around 310,000 tonnes. The Simpele mill produces high quality lightweight folding boxboard, mainly for food and pharmaceutical packaging.

The investment will start immediately and is expected to be completed in the second half of 2025.

Stora Enso Postpones Decision to Convert Paper Machine at Langerbrugge Mill to Recycled Containerboard

Stora Enso has decided to postpone potential plans to convert a paper machine at its Langerbrugge paper mill in Belgium from the production of recycled newsprint to recycled containerboard.

Currently, the Langerbrugge mill has two machines: one produces recycled newsprint and the other produces recycled supercalendered magazine paper. The mill has the capacity to produce 540,000 tonnes per year of recycled paper.

In June of 2022, Stora Enso announced the start of a feasibility study that would focus on the conversion of the site's newsprint paper line. The conversion, Stora Enso said, would enable the company to further grow its recycled and recyclable packaging materials capacity and to meet the growing demand in end-use segments.

In an article posted on Stora Enso's website (May 17, 2024) highlighting the Langerbrugge mill, Rebekka Thielemann, VP, Product and Sales Recycled Containerboard, commented on the recent feasibility study and machine conversion decision.

"Our study on the opportunity to deliver more recycled packaging to the market proved positive. However, as the availability of recycled containerboard in Europe currently meets market needs, we decided to postpone the conversion decision, which will be taken in due time," Thielemann explained.

"While we remain agile and responsive to market trends, our dedication to our paper



customers is unwavering. We are fully committed to continuing to provide the high-quality products and service excellence that our clients have come to expect from us for the foreseeable future, solidifying Langerbrugge's legacy as a cornerstone of paper production," she added.

EUROPE

UPM to Permanently Reduce Graphic Paper Capacity in Germany

UPM Communication Papers announced plans to permanently close its Hürth newsprint mill and to shut down one fine paper machine at Nordland Papier (PM 3) in Dörpen—both assets are located in Germany. If realized, the measures would result in annual reductions of 330,000 tonnes of newsprint paper capacity (Hürth) and 280,000 tonnes of uncoated fine paper capacity (Dörpen) in UPM’s portfolio.

Should the plans be implemented, the number of positions affected is estimated approximately at 135 in Hürth and 210 in Dörpen.

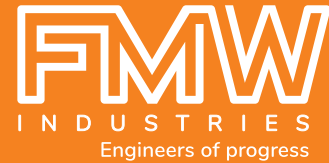


Both paper machines affected by the planned measure would stop graphic paper production by the end of 2024 at the latest. Production on the remaining paper machines at Nordland Papier will continue.

UPM explained that graphic paper demand has continued to decline, reflecting the overall trend in paper consumption driven by digitalization. The decline in demand accentuated in 2023 and a durable recovery is not expected, resulting in significant overcapacity in the market.

“In recent years, we have already responded to overcapacities in the global paper markets with selective capacity reductions, always considering the competitiveness of our business,” said Antti Jääskeläinen, Executive Vice President, UPM Communication Papers. “The planned closures would ensure an efficient and flexible use of our remaining paper assets and will therefore enable UPM Communication Papers to stay a reliable partner to our customers in the long run.”

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EUROPE

Sappi Establishes Inhouse Capacity to Test Recyclability of Its Products

Sappi has established a recyclability testing laboratory within its R&D Department. The lab plays a key role in ensuring that Sappi’s packaging and specialty papers are recyclable, in compliance with the latest EU regulations and market demands.

“Paper is already one of the most widely recycled materials in Europe, benefiting from well-established collection, sorting and recycling infrastructure alongside its highly recyclable nature,” Sappi said.

“Building up this recyclability testing laboratory within Sappi brings valuable insights to our technological developments by demonstrating how products perform during the recycling process,” the company added.

The new recyclability lab is equipped



with state-of-the-art test equipment and capacity to evaluate Sappi’s products — during the product innovation process and

when launched to the market. It helps to ensure that Sappi’s product’s recyclability tests are up-to-date and that all operators are trained appropriately.

Jean Pierre Haenen, Director R&D, explained, “Customers have been asking us to support their shift away from plastic and towards fiber-based packaging solutions. The new lab helps us meet those needs at the same time as allowing our own product innovation to keep the circular economy firmly front-of-mind.”

The testing laboratory also supports the recyclability evaluation of products from Sappi customers and partners, enabling suggestions for ways to improve sustainability and circularity.



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INDUSTRY SUPPLIERS

Valmet Enters JV with Körber to Advance Digital Offering to the Tissue Industry

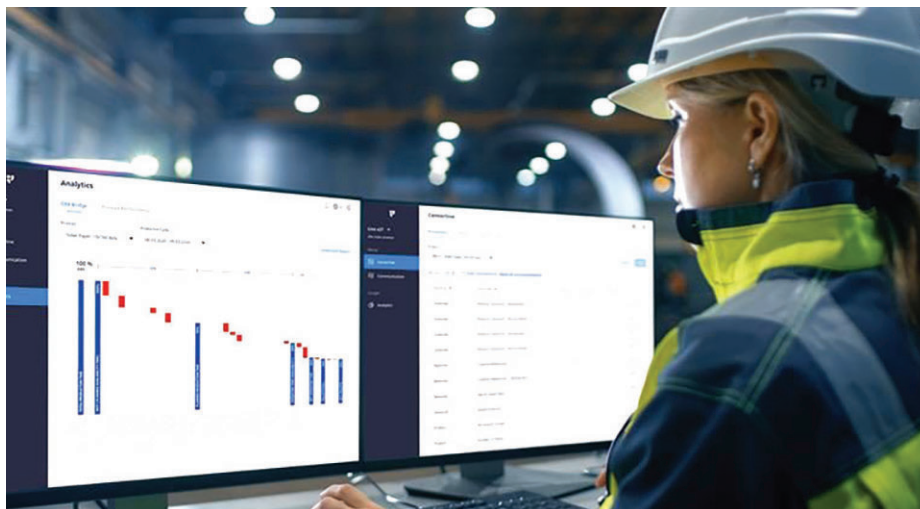
Valmet and Körber in May reached a joint venture agreement to further strengthen FactoryPal, a venture of Körber. FactoryPal is a software developed for tissue converting operations that improves shopfloor manufacturing performance and productivity.

The joint venture follows Valmet's acquisition of Körber's Business Area Tissue that was completed in November 2023.

Under the agreement, Valmet will become the majority shareholder of FactoryPal, and FactoryPal will continue operating as an own legal entity under the existing FactoryPal brand.

According to Valmet, FactoryPal software empowers tissue mill teams to achieve seamless operations by generating and utilizing high quality data combined with state-of-the-art user experience and advanced artificial intelligence (AI). FactoryPal acts as a trusted co-pilot on the shop floor.

"Valmet has a unique end-to-end offering



for tissue producers, from stock-preparation and tissue machines to rewinders, converting and packaging lines, as well as services and automation systems," said Petri Rasinmäki, Business Line President, Paper, Valmet. "We see FactoryPal as an excellent addition that will provide performance optimization, not only for converting operations, but eventually

also for the entire tissue making process."

Currently, there are 55 employees working for FactoryPal in Germany, Portugal, Italy, the U.S. and Brazil.

The set-up of the joint venture is subject to customary closing conditions. The closing of the agreement is estimated to occur at earliest on August 1, 2024.

IBS Papertech Starts-up Camera-based Sheet Monitoring Systems for Cartiere Saci

IBS Papertech announced that it has successfully completed the start-up of monitoring systems for stock activity and formation at Cartiere Saci S.p.A in Italy.

At the Cartiere Saci mill, IBS's TableVision and FlocVision have made it possible to monitor and evaluate stock activity and formation online with the help of cameras and to analyze historical trends.

"The new camera systems in combination with the previously installed IBS ITABLE®, offer the ability to continuously analyze the sheet forming process and to optimize it immediately, if necessary," production managers at the mill said.

With TableVision, the intensity of the stock activity is measured by using high-resolution, high-speed cameras. An image analysis software trained with artificial intelligence evaluates an activity index number for each dewatering element, thus creating a holistic activity profile along the initial forming zone.

FlocVision measures the formation along the paper machine and outputs a live/online trend. The system can consist of several camera positions along the machine, especially on separate layers in a multi-layer wire section. The fully integrated software allows operators to view formation and



other monitoring and inspection views, directly from the operator room.

Worldwide Logistics Solutions

Headquartered in Austria, Jerich International is a global group of companies that offers large-scale trade and industry customers a holistic logistics approach to freight forwarding through global supply chain management.

Jerich International was selected as our corporate identity to reflect our global presence and ongoing expansion efforts. Our comprehensive logistics strategy encompasses four key service domains: traditional forwarding services, terminal logistics, information and communication technology, and value-added supplementary services. Rather than simply participating in isolated aspects of the logistics process, such as terminal operations and transportation, we orchestrate the entire supply chain from the moment an order is placed by the end customer. This approach enables our clients to focus on production while we seamlessly coordinate supply chain operations to meet the specific requirements of manufacturers and their clientele.

Quality, promptness and reliability. These factors play a very important role for the success of Jerich International

Jerich International offers tailored logistics solutions designed for specific projects, both inbound and outbound, ensuring unwavering levels of planning precision and delivery reliability. Our approach to customization seamlessly integrates us into our clients' organizations, fostering a deep alignment with their internal structures. By prioritizing the cultivation of enduring partnerships, we facilitate swift and efficient development of innovative solutions. Instead of adhering to conventional methods, Jerich International leverages bespoke concepts, extensive expertise, and immeasurable experience to establish pioneering standards within the logistics industry.

Enhanced efficiency through specialization defines our company's objective and Jerich International's philosophy as an industry-focused logistics service provider. Our Group predominantly caters to clients who prioritize adherence to dispatch and delivery schedules. Timely loading and unloading are integral components of our Total Quality Management (TQM) system, subject to continuous monitoring. Leveraging standardized software for dispatch planning and warehouse management throughout the group enables us to serve our customers a closed supply and IT chain, with published results readily accessible via the web.

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Through our existing and proven transport and service platforms, we possess an infrastructure that is fully aligned with future trends and advancements. In the field of terminal logistics, Jerich International manages a network of substantial rail-connected logistics centers, container terminals, depots, and specialized cross-docking hubs across Europe and North America.

Welcome to Jerich Trucking

Jerich International is proud to announce its newly established trucking division, Jerich Trucking Inc. It is part of the Jerich International brand; however, operates as its own entity. The vision of Jerich Trucking is to build strong customer partnerships by providing an elite quality service with cost effective solutions. To achieve that, Jerich Trucking Inc. works with thousands of nationwide asset-based operators connected with our in-house developed TMS system. Our system has full EDI, monitoring and tracking capabilities.

Jerich Trucking Inc. was established on the same foundation and experience gained with the 50+ years of trucking history of Jerich International.



PAPER

■ *Anchor Paper Company* announced that **Landon Godley** recently joined the company's leadership team as the Director of Sales and Marketing. Godley brings a strong background in distribution sales leadership from Spartan Nash, a national wholesale foods distribution company.



Landon Godley

■ *Cascades* has appointed **Hugues Simon** as its new President and CEO, effective no later than July 1. Simon is President of the Wood Products business at Resolute Forest Products. Simon succeeds **Mario Plourde**, who will retire after 11 years at the helm of Cascades. Plourde will support Simon during a transition period through December 2024, after which he will act as a Special Advisor.



Hugues Simon

■ *Fedrigoni* has appointed **Gary Bernstein** as the new Commercial Vice President of Fedrigoni Special Paper North America. He brings a wealth of expertise in packaging, having worked at Neenah Paper for 25 years. Fedrigoni also announced that **Melissa Stevens** will now serve as Chief Marketing Officer at Fedrigoni Special Papers North America. Prior to this, Stevens held various marketing and sales leadership roles at Mohawk.



Gary Bernstein



Melissa Stevens

■ *Golden West Packaging Group* has named **Mark J. Favre** as Chief Executive Officer. He succeeds Craig Reese. In addition, **Brian McDonnell** has been named Chief Financial Officer, and **Doug Keim** has been named Senior Vice President of Customer Experience.



Mark J. Favre

■ *Green Bay Packaging* has promoted **Tom Short** to the position of Business Development Manager for National Account Sales. Short has been with Green Bay Packaging since 2006, and most recently served as an account manager.

■ *International Paper* in March elected **Andrew Silvernail** as Chief Executive Officer, effective May 1. Silvernail succeeds **Mark Sutton**, who previously announced the final phase of the CEO succession process. Sutton will continue in his role as Chairman of the IP's Board of Directors to ensure a smooth and successful transition. Silvernail has two decades of experience leading global companies in the manufacturing and technology sectors. He joins IP from KKR & Co., Inc., a global investment firm, where he served as an executive advisor.



Andrew Silvernail

■ *Sustana* has appointed **Nathan Jeppson** as Chief Executive Officer, succeeding **Fabian de Armas**. Jeppson brings more than 20 years of leadership experience, including global roles at Shell Chemical



Nathan Jeppson

and Dow. Most recently, Jeppson served as Chairman and CEO of hardwood lumber producer NWH.

■ *WCP Solutions* recently promoted **Amy Swanson** to Chief Executive Officer, succeeding **Tom Groves**, who retired and has joined WCP Solutions' Board of Directors. Prior to her promotion, Swanson served as Chief Operating Officer of WCP since 2020.



Amy Swanson

INDUSTRY SUPPLIERS

■ *Nationwide Boiler* recently appointed of **Lisa DeCastro** as Vice President of Finance. DeCastro previously worked at Nationwide Boiler as the company's Director of FP&A.



Lisa DeCastro

■ *Valmet* announced that **Thomas Hinnerskov** will take over as President and CEO on August 12. He succeeds **Pasi Laine**, who will continue as the President and CEO until August 11. Hinnerskov joins Valmet from Mediq B.V. where he has been working as CEO since 2022.



Thomas Hinnerskov



Rocky Matuska

Valmet also has appointed **Rocky Matuska** as Vice President, Services, North America, effective on August 1. Matuska currently is Director, Sales & Technology, Paper and Board, North America Capital Business at Valmet.

AUGUST 12-14, 2024
Forest Products Latin America Conference 2024

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 Vancouver, British Columbia, Canada
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SEPTEMBER 3-4, 2024
Specialty Papers Europe

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 Hotel Savoyen Vienna
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www.specialtypaperconference.com/specialty-papers-europe

SEPTEMBER 8-12, 2024
SuperCorrExpo

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SEPTEMBER 9-11, 2024
Transport Symposium 2024

Fastmarkets and International Forest Products Transport Association (IFPTA)
 Hilton Antwerp Old Town
 Antwerp, Belgium
www.fastmarkets.com/events/transport-symposium

SEPTEMBER 11-13, 2024
IMFA 26th Annual Conference

International Molded Fiber Association (IMFA)
 Omni La Costa
 Carlsbad, California, USA
www.imfa.org/26th-annual-conference

SEPTEMBER 17-19, 2024
Paper Meets Live! 2024

AF&PA and NPPTA
 Opal Sands Resort
 Clearwater Beach, Florida, USA
www.afandpa.org/events/paper-meets-live-2024

SEPTEMBER 30 - OCTOBER 2
PPC Fall Meeting & Leadership Conference

Paperboard Packaging Council
 Renaissance Waverly Hotel
 Atlanta, Georgia, USA
paperbox.org/event/2024-fall-meeting

OCTOBER 1-3, 2024
56th International Pulp and Paper Congress and Exhibition

ABTCP (Brazilian Pulp and Paper Technical Association)
 Transamerica Expo Center
 São Paulo, Brazil, South America
abtcp2024.org.br

OCTOBER 15-17, 2024
Specialty Papers US

Smithers
 Milwaukee Marriott Downtown
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www.specialtypaperconference.com/specialty-papers-us

OCTOBER 29-30, 2024
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Leveraging Partnerships to Navigate International Regulatory Hurdles

By Heidi Brock, President and CEO, American Forest & Paper Association

Advancing resilient U.S. forests is one of AF&PA's *Better Practices, Better Planet 2030* sustainability goals. Globally, forests play a major role in supplying wood and paper products to a growing global population. As the Intergovernmental Panel on Climate Change stated, "in the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fiber or energy from the forest, will generate the largest sustained mitigation benefit."

There is a growing sense of interest in protecting global forests and the benefits they provide. The U.S. forest products industry is a strong proponent of international efforts to address deforestation and forest degradation. Yet we continue to see regulatory hurdles that inappropriately place the U.S. into "one-size-fits-all" policies.

One posing, immediate policy concern for our industry is the European Union Deforestation-free Regulation (EUDR) that currently requires compliance by December 30, 2024.

EUDR requires companies who place certain agricultural commodities and products onto or out of the European Union (EU) market, including wood and wood products, to prove that their products do not originate from deforested land nor have contributed to forest degradation



The risk of U.S. pulp and paper products failing to meet EU deforestation-free and legality requirements is extremely unlikely. However, the EUDR's complex implementation significantly raises compliance costs for U.S. producers, outweighing the benefits.

after 2020. This regulation has significant global implications.

To be clear, the U.S. pulp and paper industry is not linked to global deforestation and forest degradation. In fact, U.S. forests are strong. The net forest area in the U.S. has been steadily increasing over the past 30 years. In fact, more than 1 billion trees are planted each year in the U.S., providing forests for future generations. Sustainable forest management is critical for the future of our nation's forests. AF&PA members recognize that healthy, managed forests support biodiversity while protecting forestland from disease, insect infestations, invasive species and wildfires.

As with all laws and regulations, details matter. EUDR, as currently

written, imposes some unachievable requirements that create significant technical barriers, which risks trade between the EU and the U.S.

The EU relies on wood, pulp and paper imports from the U.S. We export approximately \$3.5 billion worth of products to EU countries and supply about 60% of the specialty pulp EU manufacturers use to make diapers, menstrual and incontinence products. The U.S. supplies 85% of the specialty pulp used globally.

EU manufacturers would not receive the supply of specialty pulp needed if U.S. pulp and paper manufacturers cannot overcome many of the EUDR's technical barriers.

For example, EUDR's strict geolocation

and traceability requirements pose significant challenges because of our industry's complex supply chains. Tracing each individual wood chip back to the original forest plot of land is effectively impossible – because materials from sawmills and forest residues are regularly blended multiple times throughout the production process.

We are proud to be responsible stewards of our environment. The paper and wood products industry leads in promoting sustainable forest management. AF&PA members are committed to sourcing wood from responsibly managed forests, adhering to sustainable fiber procurement principles. This ensures the safe and smart procurement of the wood needed to make the products we rely on.

The U.S. should be considered a low or no risk region for this regulation. The risk of U.S. pulp and paper products failing

to meet EU deforestation-free and legality requirements is extremely unlikely. However, the EUDR's complex implementation significantly raises compliance costs for U.S. producers, outweighing the benefits.

AF&PA is working with our partners across the forest products value chain, along with other commodity groups in the U.S., and international partners through the International Council of Forest Product Associations (ICFPA) to raise concerns to the U.S. government and European Commission. The clear consensus is that we need a delay in implementation of the EUDR.

We're already demonstrating our strength of a clear united voice across the U.S. value chain and with our global industry partner associations. And our message is being amplified by our industry champions in the

U.S. Congress, urging the U.S. Trade Representative (USTR) to engage with the European Commission.

The U.S. pulp and paper industry is dedicated to manufacturing products from healthy and sustainable forests. We also believe in balanced and achievable regulations. We welcome the opportunity to work together with EU regulators and other stakeholders in a successful implementation of EUDR. But, success will require time and careful consideration as to the regulations' implementation.

Now is the time to join your voice with ours. Visit our website (www.afandpa.org) to learn more about EUDR, what AF&PA is doing and get involved in our advocacy. Sign-up for our AF&PA Delivered newsletter to follow our progress on this issue and our many other advocacy efforts to advance a sustainable U.S. forest products manufacturing industry. ■



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Report Forecasts World Corrugated Packaging Market Returns to Growth Trajectory in 2024

Global containerboard and corrugated board demand are facing a series of challenges and shifts in market dynamics across the next five years. These are expertly profiled, and quantified in the new market data report — *The Future of Global Corrugated Packaging to 2029* — from Smithers, a multinational provider of testing, consulting, information, and compliance services.

The report’s in-depth analysis of capacity changes, pulp pricing, and end-user demands shows that in 2023, global containerboard production was 183.4 million metric tons, a -4% decline on 2022. These were converted into around 165 million tons of corrugated board, a decrease of more than -7% on 2022; with value reaching \$224.4 billion. This reflects the end of the period of disruption in world supply that began in 2020 with Covid-19, which was characterized by disruption to global logistics impacting demand, price fluctuations leading to high inventories, and subsequent destocking.

Smithers is now able to forecast slight growth across 2024, with value increasing to \$231.7 billion. This will



Smithers is now able to forecast slight growth across 2024, followed by a broader recovery in world demand at an average annual growth of +2.5% by volume.

be followed by a broader recovery in world demand at an average annual growth (AGR) of +2.5% by volume. This will see world corrugated volumes reach 190 million tons in 2029; value in the market will increase at a +3.7% AGR to \$277.6 billion, at constant prices.

Many major containerboard suppliers have already invested in increased capacity, which will manifest in low operating rates across much of the Smithers forecast period. This is prompting moves that will redraw the commercial landscape for corrugated,

with four of the six largest converters worldwide — Smurfit Kappa/WestRock (Sept 2023); DS Smith/International Paper (April 2024) — pursuing multi-billion-dollar mergers. Other firms are rationalizing operations; delaying further investment, taking extra downtime or even closing older mills and box plants.

Across 2024-2029, demand for corrugated packaging will vary across the 13 different end-use sectors Smithers profiles. The packaging and transportation of food products accounted for over 46% of the consumption of corrugated

packaging material during 2023, a relatively constant level since 2016, but is expected to change slightly to 47% by 2029. This will include a new surge for corrugated grades for processed foods, although growth in fresh food & produce will be slower, and electrical goods are expected to have the most attractive volume growth of all products.

Multiple opportunities are arising for corrugated materials. Their recyclability means they are increasing being favored by brand and legislators, not just in transit, but consumer-facing primary packs. This is pushing converters towards finer, premium flute grades that can compete with folding cartons in sectors such as cosmetics, confectionery, and consumer electronics.

Multiple opportunities are arising for corrugated materials. Their recyclability means they are increasing being favored by brand and legislators.

Legislation such as the EU's recently approved Packaging and Packaging Waste Regulation (PPWR) are opening other opportunities. The PPWR will ban certain single-use plastic formats by 2030, including for smaller volume produce packs, and collation films for multipack beverages and food. Similar potential exists in food-service applications, is effective non-PFAS oil and grease resistance coatings can be integrated into existing corrugated lines.

Sales of retail-ready packaging (RRP) boxes are also forecast to increase rapidly due to the increased popularity of budget grocery chains in developed markets, and growth of retail infrastructure across Asia. In some instance converters will benefit from the installation of a new generation of high throughput inkjet presses for corrugated board, producing higher quality customized RRP.

The same equipment can be used to capitalize on the ongoing rise in e-commerce shippers. Twinned with design innovations these can produce visually appealing, consumer-oriented boxes that enhance branding and offer superior consumer returns. ■

PUMP PACKING REINVENTED

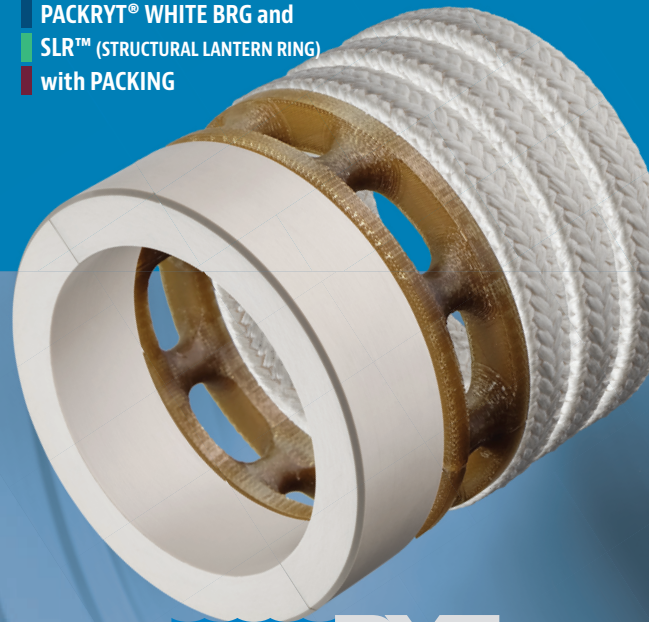
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Smurfit WestRock — An Opportunity in Sustainable Packaging

“I’ve always believed that opportunity comes to pass and not to pause. Similarly, our philosophy has always been to do things when you can, and not when you have to.” — Tony Smurfit, CEO of Smurfit Kappa Group.

By John O’Brien, Managing Editor



“Many of you that know me understand the value I place on culture and people.”
— Tony Smurfit, CEO of Smurfit Kappa Group



“We are committed to every aspect of sustainability, from supporting our people and communities to bettering the planet to innovating for our customers and their customers.”
— David Sewell, President and CEO of WestRock

Editor’s note: At the time of this magazine going to print (mid-June), Smurfit Kappa and WestRock have not yet finalized the combination of the two companies, which is expected in early-July. So, here’s to keeping my fingers crossed that all goes according to plan.

On September 12, 2023, Ireland’s Smurfit Kappa and U.S.’s WestRock officially announced an agreement to combine the two companies and create what could arguably be considered the largest producer of sustainable packaging in the world — Smurfit WestRock.

But it was a joint press release issued by Smurfit Kappa on Sept. 7 that first unveiled the megadeal, announcing that the boards of directors of both companies are “discussing the key terms of a potential combination to create Smurfit WestRock.”

According to the terms of the deal, “The Potential Combination would be expected to involve the creation of a new holding company, Smurfit WestRock. Smurfit WestRock would be incorporated and domiciled in Ireland with global headquarters in Dublin, Ireland, and North and South American operations headquartered in Atlanta, Georgia.”

Financially, the deal calls for Smurfit Kappa to buy WestRock for about \$11.2 billion. As of June 30, 2023, the companies’ combined last twelve months’ adjusted revenue and adjusted EBITDA was approximately \$34 billion and \$5.5 billion, respectively.

So far, plans to bring the two companies together have gone smoothly.

The European Commission on April 5

approved, under the EU Merger Regulation, the merger between Smurfit Kappa Group plc and WestRock Company. And, the shareholders of both companies on June 13 approved the transaction.

In the latest information provided by the companies, finalization of the deal is expected on July 5.

So, in a nutshell, what do we have?

The combination of Smurfit Kappa and WestRock will result in an expected annual capacity of nearly 23 million short tons. This will make them the largest global producer of packaging paper with approximately 20% market share¹.

In an article by Greg Rudder at Fastmarkets, Rudder points out, “Smurfit Kappa is the largest containerboard producer in Europe, and is active in Mexico, Brazil, and Latin America. WestRock is the second largest containerboard producer in North America with about a 20% market share, and the company also runs North America’s second largest boxboard and folding carton business. WestRock has large containerboard business in Mexico and Brazil, and is the largest unbleached packaging kraft paper producer in North America with a 50% market share.”

Rudder also noted that WestRock’s containerboard capacity is 8.98 million tons, following the closures of its North Charleston (South Carolina) and Tacoma (Washington) paper mills in 2023.

The company’s consumer packaging capacity is 4 million tons and its unbleached

kraft paper bag capacity is just less than 1 million tons. Total board and packaging paper capacity for WestRock is about 14 million tons. Smurfit Kappa's global capacity is 9.1 million tons.

Significantly Expanded Global Reach and Operational Footprint

Smurfit WestRock would have geographic reach across 42 countries with a significant presence across both Europe and the Americas. From a manufacturing perspective, the new entity will have approximately 67 mills and 500 converting operations.

The combination of the two packaging producers appears to be geographically balanced with limited overlap.

From a regional standpoint, Smurfit Kappa's manufacturing operations include:

- North America – 1 mill and 7 converting plants.
- Europe (and other) – 23 mills and 209 converting plants.



The combination of Smurfit Kappa and WestRock will result in an expected annual capacity of nearly 23 million short tons of packaging grades of paper.

- Latin America – 11 mills and 57 converting plants.

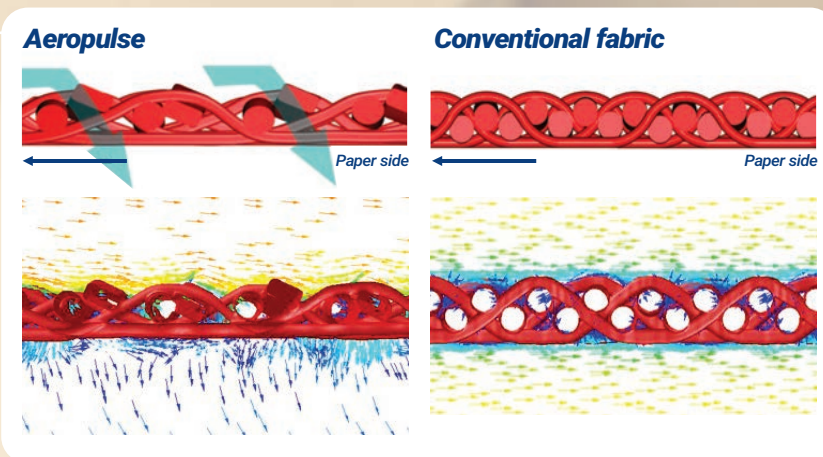
WestRock's manufacturing operations include:

- North America – 25 mills and 166 converting plants
- Europe (and other) – 2 mills and 44 converting plants
- Latin America – 5 mills and 14 converting plants

The two companies also bring together complementary portfolios. In terms

of product mix, Smurfit WestRock can offer a comprehensive range of packaging solutions – about 85% of which would be corrugated, paper & other packaging such as cereals, confectionary & snacks, consumer chemicals, display, e-commerce /distribution, food & beverage, industrial, pharma / health / beauty, etc. The additional 15% would be consumer packaging, such as beauty & personal care, beverage, food & food service, and healthcare.

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With a strong focus on innovation and sustainability, packaging such as WestRock’s Sustainable Ready Meals fit nicely into Smurfit WestRock’s expanded portfolio of packaging solutions.

Cultural Alignment is Key

Culturally, both Smurfit Kappa and WestRock appear to take a similar approach in the way they conduct business, focus on customers, view sustainability, value employees, and give back to the communities where they operate.

On a September 2023 merger announcement call with WestRock’s President and CEO, David Sewell, Tony Smurfit, CEO of Smurfit Kappa Group, said, “Many of you that know me understand the value I place on culture and people. Our culture has been variously described as both performance-led or as



Smurfit Kappa’s range of corrugated and hexacomb packaging products are designed to provide optimal levels of strength and protection to meet any challenges in the supply chain.

owner-operator type culture, familial-led professional, but always grounded in what and how we deliver better for our customers day-in, and day-out. We see that same approach within WestRock with David and his team sharing a strong customer focus. That cultural alignment is fundamental to our combined potential and is one of the key reasons why we are here today.”

On that same September merger call, Mr. Sewell also emphasized the alignment of company cultures.

“Smurfit Kappa and WestRock’s complementary sustainable commitments and targets, across reducing emissions, water usage and waste, and further improving sustainable forestry are yet another reason our companies are such a great fit. Ensuring the health and well-being of our team members and communities is critical to building a strong sustainable future. As a larger company with enhanced scale, Smurfit WestRock will be even better able to invest in our teams and where we work,” Mr. Sewell said.

Focus on Sustainability

In March 2024, Smurfit Kappa announced that it achieved four of its mid-term, Better Planet 2050 sustainability targets. The Better Planet 2050 targets quantify the company’s commitment to delivering a sustainable future through low-carbon, circular packaging solutions; increasing support for the communities in which it operates; and further enhancing the lives of its employees.

According to its 17th Sustainable Development Report published, Smurfit Kappa has achieved its targets on:

- Waste: achieving a 35.8% reduction in waste sent to landfill, ahead of its 2025 target of 30% (24% in 2022).
- Forestry: achieving 95.5% of packaging sold with Chain of Custody certification,

ahead of its 2025 target of 95% (94.3% in 2022).

- Communities: EUR 25.6 million donated to support social, environmental and community initiatives, ahead of its 2025 target of EUR 24 million (EUR 18.4 million in 2022).
- Diversity: 25.1% of management positions were held by women at the end of 2023, ahead of its 2024 target of 25% (23.5% in 2022).

Commenting on the report, Mr. Smurfit said, “I am immensely proud of the significant progress made towards our sustainability goals during 2023. I am particularly proud that we have already achieved four of our Better Planet 2050 targets. This not only reflects the dedication of our people and the effectiveness of our investment programs, but it shows our unwavering commitment to supporting our local communities, creating a better planet and delivering a low carbon, circular future.”

At WestRock, Mr. Sewell, highlighted the company’s 2023 Sustainability Report. “At WestRock, we consider it a privilege and an important responsibility to build on our company’s legacy of contributing to a more sustainable world. We are committed to every aspect of sustainability, from supporting our people and communities to bettering the planet to innovating for our customers and their customers.

“Every day we draw on our spirit of innovation, partnerships with customers and leadership in fiber-based packaging to advance our targets and create a more circular economy. We are proud of the progress we made in fiscal 2023, and I am pleased to share some of the highlights:

Supporting People and Communities

- Diversity, Inclusion, Equity and Belonging: Over \$940 million spent with small and diverse-owned businesses.

- Community Engagement: \$3.6 million invested with strategic community partners.

Innovating for Our Customers and Their Customers

- Plastic Replacement: About 96% of WestRock’s packaging is recyclable, compostable or reusable with a goal to reach 100% by 2025.
- Advancing Circularity: More than 4.7 million tons of North American recycled fiber used to create new WestRock packaging.
- Awards: Winner of more than a dozen awards worldwide, including being named one of Barron’s 100 Most Sustainable U.S. Companies.

Bettering the Planet

- Greenhouse Gas (GHG) Emissions Reductions: 11.3% total reduction in Scopes 1 and 2 GHG emissions and a 15.3% reduction in relevant Scope 3 emissions from a fiscal 2019 baseline.
- Recycling: Nearly 6.4 million tons of recyclable material managed.
- Sustainable Forestry: 100% of virgin fiber sourced from responsibly managed forests.

Mr. Sewell concluded, “Our significant progress is evidence that we are guided by our purpose to innovate boldly and package sustainably to meet the needs of our customers, team members, investors and the many communities where we operate.”

Leadership

Upon completing the combination, Smurfit WestRock will be led by an experienced group of executives and upper management from both companies. **Tony Smurfit** (CEO of Smurfit Kappa) will serve as Group CEO and President of the new packaging giant; **Irial Finan** (Chair, Smurfit Kappa Board) will serve as Chair; and **Ken Bowles** (CFO of Smurfit Kappa) will serve as Executive Vice President and CFO.

Regionally, **Laurent Sellier** (CEO of Smurfit Kappa the Americas) will serve as President and CEO, North America – including Mexico; **Saverio Mayer** (CEO, of Smurfit Kappa, Europe) will serve as President and CEO of Europe, MEA and APAC; while **Jairo Lorenzatto** (President WestRock, Latin America) will serve CEO of LATAM.

Conclusion

Overall, the combination of Smurfit Kappa and WestRock creates a formidable player in the packaging industry, with enhanced capabilities, increased scale, improved competitiveness and a strong focus on innovation and sustainability. ■

Reference

¹ ResourceWise. Smurfit WestRock Merger: Considerations for Paper Packaging Purchasers, Nov. 29, 2023.



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Expert Insights on the Use of Enzymes as a Driver of Pulp and Paper's Future

Enzymatic solutions help pulp, paper, tissue and packaging mills make the most of every wood fiber, reduce energy use and improve safety.

This Q&A article was originally published by Buckman.

Pulp and paper mills are managing a multitude of market demands and expectations. Consumers now demand transparency across the supply chain and want products they know are produced sustainably. This demand impacts both the chemicals you use, and the energy required to achieve your production targets. These levers can be costly and lead to unintended consequences.

Buckman has a longstanding collaboration with Novozymes, a world leader in biosolutions. This liaison underscores benefits of the use of enzymes for paper-based products. An interview with Greg DeLozier, senior staff scientist at Novozymes, offers updates — and myth-busting — on the state of enzymes in paper production.

Question #1: Use of enzymes in the tissue production process is well

known, but similar applications in paper-based packaging require a different set of important insights to adapt the technology to the manufacturing process. What are the key characteristics of enzymes being used in paper-based packaging production?

Recycling trends have been very favorable in recent years resulting in the growth of enzyme applications in the packaging segment. The enzymes that are used in packaging applications add value through selective modification of pulp and fiber. Enzymatic modification of the fiber surfaces improves the strength properties of pulps and thereby the potential for reduced energy, chemicals and even fiber to produce packaging materials.

While there are modest differences to account for differences in objectives, fiber type, pH, temperature, consistency, and

retention times, the enzymes used in packaging mills are quite similar to the ones used in tissue mills. And like tissue applications, enzymatic applications within the packaging mill can address multiple issues, particularly those encountered when using recycled fiber.

Furnishes containing a significant proportion of recovered fiber suffer from excessive debris and contaminants which absorb additives in an unfavorable way, adversely impact dewatering and accumulate as machine deposits. Certain enzymes have been developed specifically to target these problematic elements and thereby improve the efficacy of wet-end chemicals, the on-machine performance of the furnish and the structure, strength and quality of the finished products.

Question #2: Enzymes are known for reducing operating costs in pulp mill bleaching operations or improving deposit control in recycled board mills. Are there other areas where you see significant results?

Enzymes have been used effectively to control certain types of deposits. One class of enzyme targets pitch associated with mechanical pulp production or use; another class targets contaminants — stickies — associated with recycled fiber. Another class prevents biological deposits that may accumulate in the paper machine or in the final product. These deposit control enzymes have been applied for decades, yet there is still opportunity for growth. In fact, new deposit control enzymes have recently been introduced into the market to contend with the increasingly broad range of contaminants encountered in recovered fiber.

Enzymatic modification of starch for sizing and coating applications, one of the oldest applications of enzymes in paper and board manufacture, continues



New deposit control enzymes have recently been introduced into the market to contend with the increasingly broad range of contaminants encountered in recovered fiber.

to improve production economy and provide greater control over starch properties. New fiber modification enzymes with greater tolerance for the normal conditions within market pulp mills and virgin board mills are currently adding value within these growth segments.

Question #3: Many people working in the industry believe that enzymes are “alive” and could present risks to the production and quality of paper-based packaging. How do you address this?

All enzymes are protein. Enzymes are simply three-dimensional biological molecules comprised of amino acids. As such, enzymes do not grow, replicate or reproduce. They are there for a short time to modify the fiber surface or disrupt the formation of deposits. And then they eventually degrade into harmless fragments of protein, peptides and amino acids. They do not end up in the product.

Enzymes are distinctly different from other wet-end chemical technologies in that they do not become a part of the fiber or the finished product. Unlike

chemical processes, enzymes use the natural components of the fiber to introduce new properties. And unlike mechanical processes — for example, mechanical refining — the relatively large enzyme molecules act at the accessible surfaces of the fiber and do not affect the integrity of the bulk of the fiber wall.

Question #4: How do you address the topic of enzymes performing too slowly or unpredictably in full-scale applications in pulp and paper production?

As enzymes must encounter and then react with their preferred substrates, the desired benefits may develop slower than conventional chemistries and/or mechanical processes. Typically, enzymes should be applied in a manner that quickly and uniformly distributes them at or near the point of application to maximize contact with their substrates within the available residence time.

Note that mill closure and water circuits (e.g. feedback loops) may allow enzymes to cycle-up within mill operations. In such instances, target benefits may be obtained with relatively low

enzymatic solutions

dosing levels of enzyme. As enzymes diffuse throughout the pulp within a storage tank or tower — directly influenced by flow rates and flow patterns — or cycle-up to an ideal concentration within mill circuits, their impact may be perceived as relatively slow. That said, there are several places throughout pulp and paper operations where enzymes can be applied to deliver the greatest benefit in the shortest amount of time.

Before recommending enzymes, it is important to determine the proper application point. Ideally, enzyme-based products should not require process modification. Enzymes should be able to tolerate the conditions at and downstream of the point of application and require no or minor process modification to deliver the benefit. A suboptimal response may indicate that the best application location was not found.

Changes and swings in process conditions may affect the performance of the enzymes as well. A thorough knowledge of the system will assist in the identification of issues within the process which could hinder or even deactivate the enzymes.



Enzymes are produced naturally using fermentation — similar to the production of wine and beer.

Another important factor is the composition of the enzymatic product. Products prepared using single or rational blends of two or more enzymes can be applied with greater control over their performance. However, products based on ill-defined or minimally-processed enzymes may be associated with greater risks due to unknown, undesirable, and unpredictable side-activities. Knowing as much as possible is critical to the selection and delivery of the proper enzymes to maximize performance.

Question #5: How can enzymes help producers of packaging grades, and

what are the main benefits of using them in the production process?

Enzyme applications seek to enhance the runnability and strength potential of conventional furnishes. By acting only on outer surfaces of the fiber and creating new functionalities from the natural constituents at the fiber surface, the enzymes influence subsequent interactions between fibers and wet-end chemistry. The resultant fiber properties reduce production costs and foster new strength-structure relationships in finished products. Strength requirements can be realized with less energy, chemistry or even fiber (e.g. light-weighting).

Increased content of recycled fiber within a furnish provides more opportunity for further valorization through enzymatic applications. Enzymatic upgrading of recovered fiber and mitigation of contaminants may allow the reduced use of virgin fiber in blended furnishes.

Question #6: Today's packaging grade producers are looking for more sustainable products. Sustainability is influenced by the raw inputs including fiber and chemistry. Can enzymes help, and if so, how?

Enzymes are produced naturally using fermentation — similar to the production



Enzyme applications seek to enhance the runnability and strength potential of conventional furnishes.

of wine and beer. As enzymes are not derived from fossil sources, their production is nearly carbon neutral. The minor carbon footprint of enzyme products is greatly offset by the reduced footprint afforded through their application. Improving the runnability of the furnishes reduces the energy requirements in the drying section. Imparting desirable optical properties in pulps and building strength in paper and board with less energy and chemical inputs reduces the carbon intensity of the mill. Moreover, enzyme applications that increase the use of recycled fiber reduces the relatively greater carbon contributions of virgin fiber. Whenever enzyme application enables a reduction of energy, water, chemical or fiber input, a sustainable benefit is obtained.

Question #7: How do you see regulatory developments impacting choices for more sustainable materials, including chemistry? Do you believe enzymes would have an opportunity in this field?

Since enzymes don't become a part of a final product, the applicability of current and future regulations in the pulp, paper and board industry is likely to differ from chemical additives. However, enzymes are used across multiple industries where regulations are increasingly stringent. Near-term regulatory decisions could present unintended challenges. Ideally, the enzymatic solutions will be recognized as safe and sustainable options and compliant with current and future regulatory obligations. When used according to guidance, enzymes are relatively easy to defend and promote as preferred solutions in many industries, including pulp, paper and board.

Question #8: Do you see enzymes providing greater value in virgin or recycled paper and board production? What advice would you give for both types of manufacturers?

Enzymes can provide strong, positive results in recycled paper and board applications — especially in the packaging and graphic segment — as there is a strong interest in recovering the original desirable attributes of virgin fiber. Enzymatic deposit control is another area closely linked to the processing and use of recovered fiber.

The most common enzymatic applications within operations producing and consuming virgin fiber are pre-bleaching and market pulp fiber modification — at the producer and consumer. Through localized activity at the fiber surface, enzymes are able to modify virgin fiber in a manner that is very different from chemical or mechanical processes. These fibers acquire attributes that cannot be obtained through chemical additives or mechanical means.

Through localized activity at the fiber surface, enzymes are able to modify virgin fiber in a manner that is very different from chemical or mechanical processes. These fibers acquire attributes that cannot be obtained through chemical additives or mechanical means.

The biggest challenge I see in the market is ensuring that the mill is able to take full advantage of the novel attributes introduced by the enzyme to fiber, pulps and furnishes. Comprehension of the underlying mechanisms of enzymatic fiber modification and deposit control is key to maximize the range and degree of value provided by enzymatic applications.

Conclusion

Buckman's enzymatic solutions help pulp, paper, tissue and packaging mills make the most of every wood fiber, reduce energy use and improve safety. At the same time, they help boost product quality, improve mill productivity and reduce costs.

For more information on enzymes for the pulp & paper industry, visit www.buckman.com/industries/pulp-paper/enzymatic-technology/. ■





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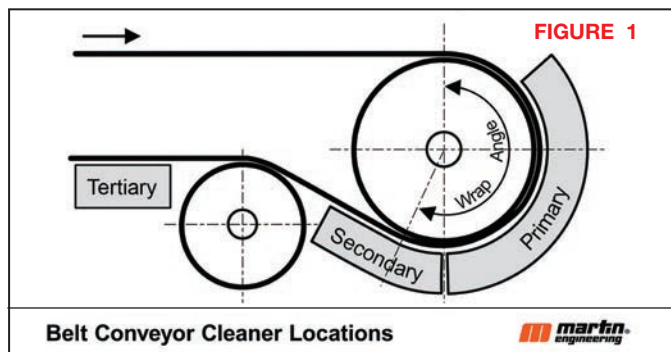
Peeling Off Pulp: Calculating Conveyor Belt Cleaner Placement

By R. Todd Swinderman, P.E., President Emeritus, Martin Engineering

Knowing the location and number of belt cleaners required for a belt conveyor system at a pulp and paper mill is critical to improving safety, increasing component life and reducing clean-up costs. A common design problem is fitting belt cleaners in the optimum locations. There are structural, spatial and safe access considerations that can offer limitations. Discharge chute configuration and installation of a dribble chute to capture extra discharge may also need to be factored into the design. This article will discuss design calculations for the location of secondary cleaners.

Placement and Positioning

The Conveyor Equipment Manufacturers Association (CEMA) defines the secondary position as the space between the head and snub pulley on the return run of the belt. [Fig. 1] Unfortunately, structural designs often result in a very short of belt surface between the head pulley and the snub pulley which is the ideal location for many secondary cleaner designs. This short distance allows little room for belt cleaners in the secondary position which is further complicated by the space needed for a dribble chute. In addition, designers often locate work platforms based on major components, overlooking access for belt cleaner inspection or maintenance. Belt cleaners typically require more attention than major components to ensure system efficiency because the blades are wear components that must be maintained at optimal cleaning pressures.

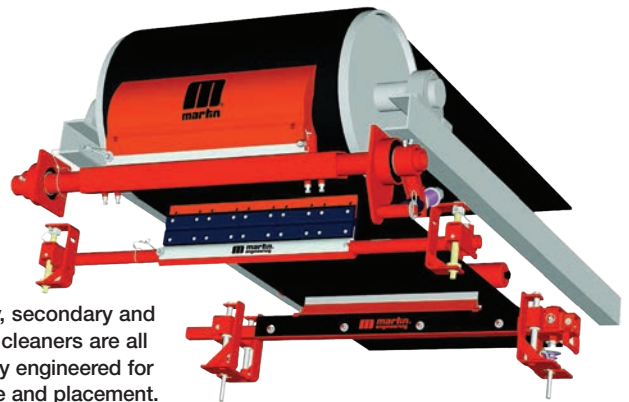


Design And Installation Considerations

There are many simple options designers should consider:

1. Is the drive pulley wrap angle really needed or are you just applying it from habit?

A common default wrap is 210 degrees created by the position of the snub pulley. The gap between the head pulley and snub



Primary, secondary and tertiary cleaners are all specially engineered for purpose and placement.

is an ideal location for a secondary cleaner but the combination of pulley diameters and wrap angle may make mounting a secondary difficult and maintenance nearly impossible. We recommend utilizing an updated engineering design program that uses either the DIN or CEMA methods for the calculation of accurate tension values and the required wrap angle, Θ .

2. Consider using a larger diameter head pulley.

Choosing a head pulley based on the minimum diameter may seem like it saves money, however, MSHA reports that up to 85% of maintenance problems are due to fugitive materials, which increase costs for cleanup, labor, and equipment replacement. A larger head pulley can allow the installation of two cleaners in the primary position and enough snub pulley space for one or two cleaners in the secondary position, significantly reducing the amount of fugitive material.

3. Place a priority on ergonomic access to the belt cleaners.

Maintenance personnel can spend up to a third of their time merely gaining access to the equipment. Designing access to seldom-inspected or -maintained components based on minimum walkway codes raises costs. Consider structure and work platforms that allow belt cleaner inspection and maintenance.

4. Consider using motorized drive pulleys.

Motorized pulleys offer energy advantages and weight savings and open up space for belt cleaner installation and maintenance. Since all rotating components (including the main bearings) are located inside the pulley, the external stub shafts need minimal space to be mounted to the structure.

5. Consider professionally trained installation.

Belt cleaners must be mounted properly, often within \pm a few millimeters, to perform optimally and limit the possibility of

damaging the belt. Contracting with the belt cleaner supplier ensures proper installation with minimal adjustment and that the new chute will retain a clean professional look.

Calculating the Adequate Belt Tension

A critical design requirement is to determine the amount of wrap around the drive pulley required to provide the adequate conversion of torque from the drive into belt tension sufficient to move the belt without slipping. It is interesting to note that the fundamental relationship describing this transfer does not depend upon the pulley diameter, only the coefficient of friction, μ , between the belt and pulley and the wrap angle, Θ and the belt tensions required to prevent slip. [Fig. 2]

FIGURE 2

$$\frac{T_1}{T_2} = e^{\mu\theta}$$

Where:

T_1 = Belt tension entering the drive pulley
 T_2 = Belt tension leaving the drive pulley
 μ = Coefficient of friction between drive pulley and belt
 θ = Angle of belt wrap around drive pulley (radians)

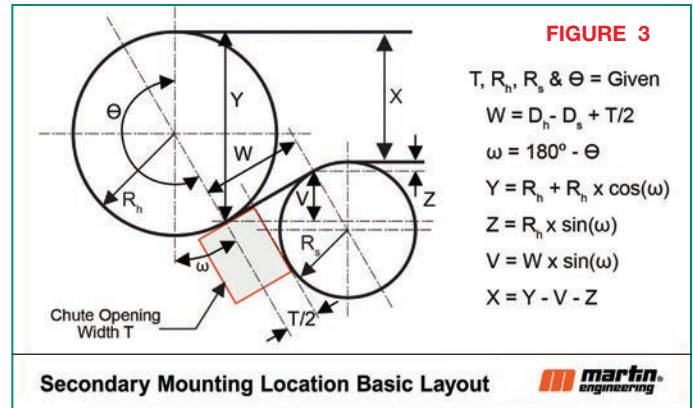
Drive Pulley Tension Relationship

Secondary Belt Cleaner Location Geometry

Assumption: Top and bottom runs of the conveyor belt (X) are parallel entering head pulley and leaving snub pulley. [Fig. 3]

Variables:

- Θ = Wrap angle of belt around head pulley.
- ω = Wrap Angle, Θ , - 180 degrees.
- H = The height of the opening for the Secondary belt cleaner blades and frame installation.
- R_h = Radius of Head pulley plus lagging, plus belt thickness
- R_s = Radius of Snub pulley plus lagging, plus belt thickness. (Snub Pulley Diameter default value: $0.64 \times$ head pulley diameter per DIN 22101)
- T = The width off the opening for the Secondary belt cleaner blades and frame installation.
- W = Length of belt segment tangent to both the Head and Snub pulleys.
- X = Distance between top and bottom runs of the conveyor belt.
- Y = The vertical distance between the top run of the conveyor belt on the Head pulley and the tangent point where the belt leaves the Head pulley and starts the return run.



Some secondary cleaners must be mounted at least 50 mm from the point the belt leaves the head pulley so this offset also needs to be considered if required. In addition, the X dimension should be checked with the idler dimensions for adequate installation space. [Fig. 4]

A similar analysis for the location of a Martin Precleaner will show that with a 1200 mm diameter head pulley, two primary cleaners can be installed in addition to a secondary cleaner. The addition of tertiary cleaners would be possible but may not be necessary if two precleaners and a secondary are mounted on the head pulley.

Conclusion

A belt cleaner system at any pulp and paper production facility should be properly specified, designed and installed to gain the direct and indirect long-term cost benefits of reduced fugitive material, but compliance is an issue as well. OSHA, 1926. 1412(d)(1) and MSHA 75.362 state, "A competent person must begin a which must be completed before or during that shift." Safe access with adequate space for installation, maintenance and inspection is critical to supporting longer system life and a lower cost of operation. ■

FIGURE 4

| | | |
|--|-------------------------------------|-------------|
| $T/2 = 150$ mm | $W = D_h - D_s + T/2$ | = 550 mm |
| $D_h = 1200$ mm $R_h = 600$ mm | $Y = R_h + R_h \times \cos(\omega)$ | = 1119.6 mm |
| $D_s = 800$ mm $R_s = 400$ mm | $V = R_s - R_s \times \cos(\omega)$ | = 53.6 mm |
| $\Theta = 210^\circ$ | $Z = W \times \sin(\omega)$ | = 275 mm |
| $\omega = \Theta - 180^\circ = 30^\circ$ | $X = Y - V - Z$ | = 791 mm |

Secondary Mounting Space Example

About the Author

R. Todd Swinderman, P.E. is President Emeritus of Martin Engineering. He has authored dozens of articles and papers, presenting at conferences and customer facilities around the world and holding more than 140 active patents.



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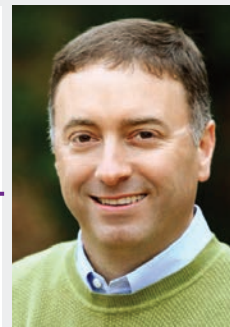
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AF&PA Details U.S. Paper Production and Capacity Trends

The American Forest & Paper Association (AF&PA) in May released the 64th Paper Industry Annual Capacity and Fiber Consumption Survey. The report provides detailed data on U.S. paper industry capacity and production compiled by the AF&PA statistics team.

U.S. paper and paperboard capacity declined by 1.6% in 2023, to 79.7 million tons. That compares to an average decline of 0.9% per year since 2014.

U.S. paper and paperboard production declined 7.2% last year, with declines in all categories except tissue.

U.S. Paper-Based Packaging Capacity

Four machines totaling 2.1 million tons of containerboard and packaging paper capacity started up during 2023, all using 100 percent recycled fiber. However, more than 1.7 million tons of capacity, mostly using wood fiber, was permanently removed in 2023 as the industry faced demand weakness from customer destocking and economic headwinds.

Containerboard capacity declined 0.7% in 2023. Despite consecutive declines in 2022 and 2023, containerboard capacity is at near-record levels due to 11 consecutive years of growth averaging 1.6% from 2011 to 2021. Containerboard share of total paper and paperboard capacity has exceeded 50% since 2021.

Packaging paper capacity increased 4.8%. All of the growth came in unbleached packaging papers. Meanwhile, boxboard capacity declined 2.0% percent in 2023. There have been 2 announcements of plans to add boxboard capacity in 2025



Containerboard share of total paper and paperboard capacity has exceeded 50% since 2021.

to meet demand for paper-based consumer packaging.

U.S. Printing-Writing and Tissue Capacity

Printing-writing capacity dropped 5.0% in 2023, lower than the 3-year and 10-year trend of 7.1% and 6.9% declines, respectively. This brings printing-writing capacity below 10 million tons for the first time in more than 50 years. Printing-writing capacity accounted for just 12% of total paper and paperboard capacity in 2023, down from 28% in 2000 when electronic communication became widespread.

Tissue capacity declined 0.9% in 2023. In spite of two consecutive year-over-year declines, tissue capacity has now increased at an average annual rate of 0.4% from 2014 to 2023.

What is Capacity?

Capacity is the tonnage of paper, paperboard or pulp that could be produced with full use of equipment and adequate supplies of raw materials and labor, and assuming full demand.

AF&PA's Capacity Survey details U.S. industry capacity data for 2023 and 2024 for all major grades of paper, paperboard and pulp, as well as fiber consumption. It is based on a comprehensive survey of U.S. pulp and paper mills. It includes production data for 2023.

AF&PA data represent about 89% of U.S. paper and paperboard industry capacity, with estimates completing the data set.

The complete Survey is available for purchase online from AF&PA at: afandpa.org/statmill or contact statistics_publications@afandpa.org or call 202-463-4716 for this report and other industry reports. ■



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