

PaperAge

SPRING 2024

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Christian Fischer
Executive Papermaker
of the Year**





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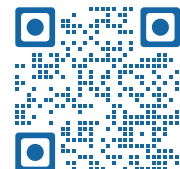
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Our assessment reviews and measures equipment and processes to provide actionable recommendations based on validated data and can be scheduled during planned downtime.



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Whether reinvesting in its operations, empowering employees, giving back to the communities where it operates or partnering with customers, Georgia-Pacific continues to focus on reaching mutually-beneficial outcomes in everything it does. As its CEO, Christian Fischer, points out, "I aim to lead with my passion to apply our Principles in all my actions across the organization in the pursuit of the company's vision, always guided by the respect for the rights of others, for the individual, and seeking mutual benefit."

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Welcome to Spring 2024

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

EDITOR IN CHIEF	Jack O'Brien
PUBLISHER	Michael C. O'Brien
MANAGING EDITOR	John F. O'Brien, Jr.
LAYOUT & DESIGN	Betsy Gold Design

EDITORIAL AND SALES OFFICE
PO Box 904
Cohasset MA 02025
Phone: (781) 378-1253
email: mobrien@paperage.com
Web Site: www.paperage.com

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Welcome to our Spring 2024 issue! That's correct, we're changing the frequency of PaperAge to four issues per year, a quarterly publication, if you will – Spring, Summer, Fall, and Winter.

Why? Efficiency. In our business, paid advertising dictates everything – mailing frequency, page counts, food on the table, that sort of stuff. I know, I know, it's hard to believe we don't do this as a hobby, although it would be nice. During the time we were publishing five issues per, there was always one issue that lacked sufficient advertising to make it cost effective to print and mail. It simply made financial sense to change the frequency of PaperAge to four issues per year.

And an interesting thing has happened. At forty-four pages, this Spring issue is the biggest issue we've had the pleasure of putting together in quite some time, and we thank all of our advertisers for their trust and support in launching our newly designated quarterly magazine. In it you'll find a story featuring our Executive Papermaker of the Year, Georgia-Pacific's CEO, Christian Fischer on page 28.

Mr. Fischer is our 37th Executive Papermaker of the Year. He is in very good company, including two former Georgia-Pacific CEOs, T. Marshall Hahn in 1990 and A.D. "Pete" Correll in 2005, who were also Executive Papermakers.

Looking forward, we're already working on the upcoming Summer 2024 issue, which will hit the presses towards the middle of June.

Beyond PaperAge, we will be producing the event publication for Paper Meets Live! 2024 at the Opal Sands Resort in Clearwater Beach,

Florida, September 17-19. The convention is hosted by AF&PA and NPTA and not to be missed.

As many readers may know, O'Brien Publications (that's us) has published the Convention Daily for the event since 2003. Prior to Covid, the Convention Daily was printed in three separate editions – an edition for each day of the convention. But Covid impacted many things and the "Daily" was one of them. For the past two years, we have published just one edition of the Daily for the convention, which again has worked out very well from an efficiency standpoint.

However, the term "daily" evokes the perception of, well, a daily magazine; one for each day of the convention. And, going forward we're going to stick with publishing just the single edition.

With that said, we have been talking with our colleagues at AF&PA about coming up with a different name for the Convention Daily. For me personally, it's a tough one because . . . it just is because I get so nostalgic about these things.

Anyway, we've thrown around a few different titles, but haven't finalized a new one yet, although we are close. Once we get it figured out, we'll post the news and details to our website: www.paperage.com.

I hope you enjoy this Spring issue of PaperAge. We are always open to suggestions about editorial content, i.e. 'how come you never include...'. Or simply, "I liked that story about..." Feedback is good and we appreciate it. Send an email to me at: jobrien@paperage.com and let me know what you think.

All the best to everyone in 2024!



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NORTH AMERICA

Graphic Packaging to Sell Augusta Paperboard Mill to Clearwater Paper for \$700 Million

Graphic Packaging announced on Feb. 20 that it signed a definitive agreement to sell its Augusta, Georgia, bleached paperboard mill to Clearwater Paper for approximately \$700 million.

“Augusta is an outstanding asset with a great team, which we concluded is a more compelling fit with Clearwater Paper’s strategic growth plans than our own,” said Mike Doss, President and CEO of Graphic Packaging. “Bleached paperboard plays a major role in sustainable consumer packaging, and we will

continue to service growing foodservice and packaging demand with bleached paperboard from our Texarkana facility.”

The Augusta mill is a well-invested site with approximately 600,000 tons per year of bleached paperboard capacity.

Arsen Kitch, CEO of Clearwater Paper, commented, “After a thorough strategic review, we’ve determined that the Augusta acquisition will be a great fit for Clearwater Paper, as it will add scale and growth capacity to improve our position as a premier, independent supplier of



paperboard to North American converters.”

The transaction is subject to regulatory approvals and is currently expected to close in the second quarter of 2024.

UPM Raflatac to Build New Converting and Distribution Terminal in Toronto

UPM Raflatac plans to open a new slitting and distribution terminal in the Toronto metropolitan area. The new facility will improve service and quality to UPM Raflatac’s customers in Eastern Canada and North-eastern U.S.

“We have made significant investments in our production capabilities to meet the demand for self-adhesive paper and film

products,” said Morgan Dundas, Sales Director, UPM Raflatac Americas. “The recent decision to expand our global network of terminals with a brand-new facility in Canada is a testament to our long history of enabling our customers to grow.”

The Toronto area terminal will house the newest generation equipment and a large warehousing space to enable storage of

high-quality film and paper laminates, as well as specialty products.

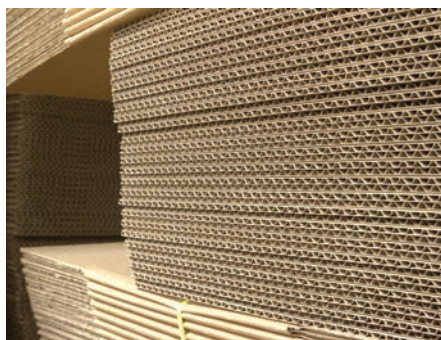
By having a large inventory of products ready to be slit and shipped, UPM Raflatac can offer customers more flexibility, customization, and efficiency in their orders. This also reduces the risk of stock-outs, delays, and quality issues that may arise from insufficient warehousing capacity.

WestRock to Build New Corrugated Box Plant in Wisconsin

WestRock has announced plans to build a new corrugated box plant in Pleasant Prairie, Wisconsin, to meet growing demand from customers in the Great Lakes region. The company intends to close its existing plant in North Chicago when construction of the new facility is completed.

This investment will position WestRock to increase its production capabilities and improve its cost profile in the Great Lakes region. Construction is estimated to cost approximately \$140 million and is expected to be partially offset by property sales.

“Investing in a new state-of-the-art corrugated converting facility elevates our production capabilities and better supports our end market strategy and margin improvement targets,”



said David Sewell, CEO of WestRock. “We are pleased to expand our presence in an area of critical demand like the Great Lakes and are confident that by implementing production initiatives such as these, we will continue to solidify WestRock’s position as the supplier of choice.”

The new facility is expected to:

- Support reduced manufacturing costs and waste, improving WestRock’s overall manufacturing cost profile;
- Improve sustainability through reduced energy consumption and new technology;
- Improve quality and customer satisfaction using state-of-the-art automation;
- Enhance digital capabilities and provide real-time data to improve decision making and reduce unplanned downtime; and
- Serve all key end markets in the Great Lakes region, which include retail, distribution, processed food, industrial, and protein businesses among others.

Construction will begin in 2024 and is expected to be completed in 2025.

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NORTH AMERICA

Fedrigoni Acquires Certain Assets of Mohawk Fine Papers

Italian specialty paper producer Fedrigoni on Feb. 23 announced the acquisition of certain assets of Cohoes, New York-based Mohawk Fine Papers.

Fedrigoni said the transaction was finalized through a new, yet to be named subsidiary company incorporated by Fedrigoni to acquire Mohawk's assets in a sale process initiated by a financial institution.

According to Fedrigoni, the deal came about "following a period of significant financial distress that affected the U.S.-based company in the past months."

Fedrigoni Group CEO, Marco Nespolo, emphasized that Fedrigoni did not buy Mohawk Fine Papers, only specific assets owned by Mohawk.

"For the sake of clarity, Fedrigoni did not acquire Mohawk as a whole legal entity, but only certain selected assets," Nespolo said. "The sharing of core values such as solid know-how and a focus on innovation and



environmental impact reduction led to the acquisition of certain assets from Mohawk, and such assets are now owned by one or more newly created companies that become part of the Fedrigoni Special Papers division and represent an important piece in the Group's overseas growth strategy."

Nespolo pointed out that Illinois-based GPA, a part of the Fedrigoni Group, is not involved in the deal.

"A NewCo set up by Fedrigoni will own the assets purchased from Mohawk. GPA

and such NewCo will remain distinct entities within Fedrigoni Group, led by different management teams with separate commercial go-to-market. Particularly GPA will not sell Mohawk branded products," Nespolo explained.

Mohawk owns two paper mills in New York, one in Cohoes and another in Waterford. The company also has a warehouse in Albany, NY.

Nespolo continued, "Part of the deal are certain production assets in Waterford and Cohoes paper mills and the Albany Warehouse. Fedrigoni aims at maintaining the Mohawk brand to further leverage its brand equity that, since 1931, is recognized among the best-known specialty paper manufacturers in the U.S. market.

"The majority of existing jobs in the acquired production assets in Waterford and Cohoes paper mills and the Albany Warehouse (around 230 people out of 287 or 80%) will join the Fedrigoni Group," Nespolo concluded.

Mondi Completes \$5 Million Acquisition of Hinton Pulp Mill in Canada

Mondi in mid-February completed the acquisition of Hinton Pulp in Alberta, Canada, from West Fraser Timber Co. for a total consideration of USD 5 million.

Mondi first announced its intention to acquire the mill in July of 2023.

The mill has the capacity to produce around 250,000 tonnes of unbleached kraft pulp (UKP) per year and will provide the Mondi Group with access to local, high-quality fiber from a well-established wood basket as part of a long-term partnership with West Fraser.

Mondi intends to invest in the



mill to improve productivity and sustainability performance and, subject to pre-engineering and permitting, invest in expanding the facility primarily with a new kraft paper machine, which will integrate its paper bag operations in the Americas to support future growth.

Sonoco Closes Uncoated Paperboard Mill in Sumner, Washington

Sonoco Products Company in early-February permanently closed its uncoated paperboard (URB) mill operations in Sumner, Washington. The mill had 55 employees.

The mill has been in operation since 1915 and owned by Sonoco since 1980. It has a capacity of 40,000 tons per year.

This decision was made as part of Sonoco's ongoing strategy to optimize its mill network and lower operating costs.

"Closing facilities is never an easy decision," said Palace Stepps, Sonoco's Vice President of North America Paper Products



& Fiber Supply. "The mill's team has played an important role in Sonoco's paper operations for over forty years, and we appreciate the hard work and dedication of the entire team."

Sonoco said current customers will continue to be served from other Sonoco mill operations.

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NORTH AMERICA

Paper Excellence Indefinitely Curtails Paper Operations at Crofton Mill

Paper Excellence Canada in January announced the indefinite curtailment of paper operations at the Catalyst Crofton facility located on Vancouver Island, British Columbia, Canada.

This decision affects approximately 75 employees.

According to Paper Excellence, market dynamics, inflationary pressures on raw materials, energy cost opportunities and a lack of local domestic fiber supply resulted in substantial increases in operating costs. These pressures have materially impacted the current and future financial viability of the paper operation.

“We recognize the difficulty this decision has placed on both our employees and the Cowichan Valley community,” said Blair Dickerson, Vice President, Public Affairs. “We will work to minimize negative impacts wherever possible.”

The Crofton pulp and paper mill had experienced a number of short-term curtailments of its paper operations in years past, but this latest, longer-term curtailment began



in December 2022, when paper production ceased on the mill’s two paper machines — C2 and C3. The company cited weakening Chinese paper markets and escalating costs of chemicals, energy and wood fiber.

However, in January 2023 the situation looked brighter when Paper Excellence announced that it would be investing nearly \$50 million to upgrade the Crofton mill’s paper operations and towards reductions in its carbon footprint.

“The C2 paper machine will be transformed to produce stronger, water-resistant paper grades that can replace single-use plastics. The investment also reduces natural gas

consumption through more efficient use of waste bark fuel in the mill’s boiler,” Paper Excellence said in a press release.

But the investment did not include the C3 paper machine. “The C3 paper machine at Crofton will remain indefinitely curtailed,” the company stated.

Pulp Operations to Continue

Currently, the mill’s pulp operations, which supports approximately 400 employees, will continue production during the indefinite paper curtailment.

Going forward, Paper Excellence said the Crofton team will focus on making the remaining pulp operations cost competitive and aligned with its overall business strategies and direction.

Paper Excellence also conveyed thanks to both federal and provincial governments for their efforts to support Catalyst Crofton’s paper operations. “The company will respect the terms and conditions of all contribution agreements affected by this indefinite curtailment and will work with the appropriate government agencies on the next steps.”

Putney Paper Mill in Vermont has Closed

Editor’s note: Excerpt from the Brattleboro Reformer.

Soundview Vermont Holdings LLC, a division of Marcal Paper but known by its historical and well-known name of Putney Paper, closed in mid-January.

The paper mill, located in downtown Putney, and its nearby converting plant, together employ 127 people. It is the end of an era started more than 200 years ago when the first paper mill was established in Putney.

In a January press release issued on behalf of the company, Soundview Vermont President Rob Baron said the papermaking division of the mill will cease operation

immediately, but that the paper converting division will remain open until the end of March. The company said 46 employees will remain at the converting plant until March 31.

“Despite our best efforts to sustain operations at this historic paper mill, we had no choice but to shut down operations,” Baron said in a prepared statement. “The high cost of energy in the region has made it unaffordable to keep our doors open. Our top priority moving forward will be supporting our incredible employees and their families throughout this difficult transition.”

Soundview Vermont acquired Putney Paper Mill in 2012. Over the past decade,



the company said it has invested tens of millions of dollars to strengthen the mill, but the rising energy costs are “too insurmountable to sustain operations.”

“The decision to close the mill comes after careful consideration and a recognition that there was not a viable path forward,” Baron said.

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NORTH AMERICA

Canfor Pulp Agrees to Sell Taylor Pulp Mill for \$7 Million

Canfor Pulp Products in early-February announced that it entered into an asset purchase agreement to sell its Taylor pulp mill site for a price of \$7 million.

The pulp mill, located in Taylor, British Columbia, Canada, has been idled since the first quarter of 2022 due to ongoing uncertainty with regards to the availability of economically viable fiber in the region and market weakness for its product — Bleached ChemiThermo Mechanical Pulp (BCTMP).



The Taylor pulp mill has the installed capacity to produce 230,000 air-dried metric tonnes

per year of BCTMP.

Commenting on the sale, Kevin Edgson, President and CEO of Canfor Pulp, said, “I am very pleased we have reached an agreement to sell our assets in Taylor, British Columbia to a new owner that is committed to repurposing the site and developing a long-term plan which will benefit the community.”

The transaction is subject to customary closing conditions, with closing expected to occur during the first quarter of 2024.

Sofidel America Produces First Parent Roll of Tissue at Duluth Mill

Sofidel America on Feb. 1 started production and produced the first parent roll of tissue at its newly acquired mill in Duluth, Minnesota.

Sofidel acquired the mill from ST Tissue at the beginning of January of this year.

The mill has the capacity to produce 65,000 metric tons per year of bath, napkin and towel grades of tissue.

In addition, the mill has a groundwood pulp plant and a recycled pulp plant.

At the time of the acquisition, Luigi

Lazzareschi, CEO of Sofidel S.p.A., commented, “This is an important acquisition, allowing us to immediately meet the growing demand, which saw a significant upturn in 2023.

“What we are acquiring is a technologically advanced plant that further improves our geographic coverage and creates the conditions to strengthen and sustain growth in what is our main market,” Lazzareschi explained.



Sofidel America has three other tissue mills in the U.S., along with a number of converting operations.

Hood Container Acquires Sumter Packaging in South Carolina

Hood Container has acquired the corrugated packaging business of Sumter Packaging Corporation based in Sumter, South Carolina. This includes all of Sumter’s design, manufacturing, assembly and fulfillment operations in Sumter, as well as the business manufactured and serviced from the Statesville, North Carolina facility.

Terms of the deal were not disclosed.

Ben DeSollar, CEO of Sumter Packaging, said, “Our roots in packaging go back over 100 years. Sumter Packaging was founded by Ed Fienning with traditions of family values, delighting our customers and being a strong community partner.”

Charlie Hodges, President, and COO of Hood Container, commented, “Hood Container is very pleased to have acquired Sumter Packaging. Ben DeSollar and his team have built a company that reflects our cultural aspirations for both our employees and communities, our focus on operational excellence, and the value proposition Hood Container expects to deliver to our customers and clients.

“In addition, Sumter’s location and asset capabilities allow Hood to continue its reach into both a new market geography and continued expansion into exciting new product markets as we continue to integrate Hood’s industrial corrugated operations with our



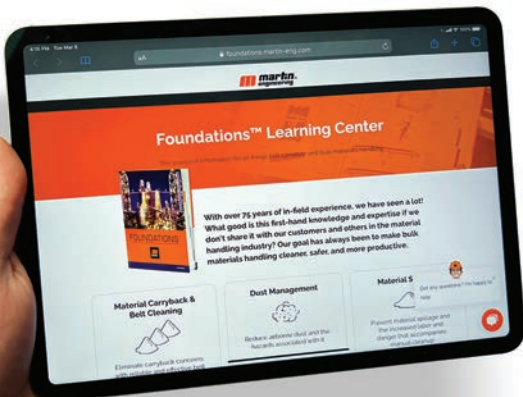
mill system,” Hodges explained.

Hood Container operates locations in seventeen states. The company also owns and operates linerboard, medium, and multiwall paper manufacturing operations in Johnsonville, Tennessee and St. Francisville, Louisiana.

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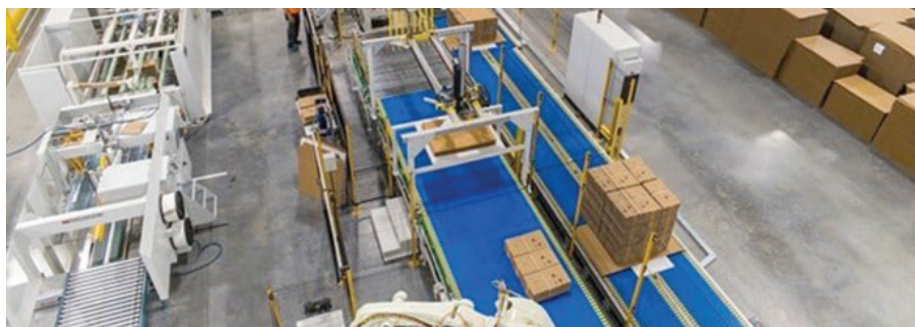
Mondi Considering Combination with DS Smith; Could Create Packaging Giant

UK-based Mondi in February confirmed that it is in the early stages of considering a possible all share combination with DS Smith, also based in the UK.

Mondi explained that it “routinely considers various options within its disciplined capital allocation framework aimed at accelerating its growth in the structurally growing packaging sectors in which it operates.”

According global news agency *Reuters*, the deal could create a packaging giant worth more than \$12.6 billion.

Reuters also reported that DS Smith “had earlier on disclosed that it received a highly preliminary expression of interest



from Mondi, although no formal proposal.”

In the February announcement, Mondi said that it “believes that a possible all share combination with DS Smith represents an exciting opportunity to create an industry

leader in European paper-based sustainable packaging solutions.”

Mondi noted that there can be no certainty that an offer will be made to acquire DS Smith.

EUROPE

Stora Enso Plans Profit Improvement Program, May Lead to Job Cuts

Due to the continued weak and uncertain market environment, Stora Enso on Feb. 1 announced plans to initiate a new profit improvement program targeting annualized EUR 80 million improvement of the operational EBIT.

The profit improvement program is designed to improve Stora Enso’s long-term competitiveness by focusing on core business activities that can drive the Group’s strategy

supported by a decentralized operating model. The profit improvement program would be implemented without any new production site closures.

However, the initiative could lead to a potential reduction of approximately 1,000 employees, Stora Enso said.

“Although difficult, this plan is necessary to ensure our long-term success and competitiveness,” said Hans Sohlström, Stora

Enso’s President and CEO. “Last year, we completed a restructuring program which led to the identification of synergy opportunities, which we plan to address with our new profit improvement initiative.”

Stora Enso said the majority of the savings would materialize during 2025, and the larger part of the employee reductions are planned to take place during the first half of 2024.

An advertisement for Ingredion. On the left is the Ingredion logo, which consists of a green stylized leaf icon above the word "Ingredion" in a sans-serif font. To the right of the logo is the headline "Your legacy should live forever." in a large, bold, black font. Below the headline is the sub-headline "Not your paper and packaging products." in a smaller, bold, black font. At the bottom left of the ad, there is a green call-to-action: "Contact us to learn about our sustainable solutions." followed by the phone number "(800) 713-0208" and the website "ingredion.com". On the right side of the ad, there is a photograph of a blue plastic cup with a blue straw, sitting on a pile of dark brown soil. A green circular graphic is overlaid on the cup.

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EUROPE

DS Smith Announces EUR 13 Million Investment in Austrian Plants

DS Smith is making significant investments in Austria — a total of EUR 13 million in its Margarethen am Moos and Kalsdorf bei Graz plants. The investments, which will increase production in Austria by 20%, are part of the company’s packaging segment’s growth strategy in East Europe.

As part of the investment program at the plant in Margarethen, new palletizing robots and transfer carriages have been installed, which, in combination with the targeted optimization of the production process, will enable a significant increase in efficiency.

At the Kalsdorf facility, a new folder gluing machine and a high-performance die-cutter were put into operation. In addition, the

modernization of the conveyor system and the expansion of the warehouses at both sites are close to completion.

“A significant portion of our investment is dedicated to advancing resource and recycling management. This includes the installation of a new stamping waste press in Kalsdorf, supporting our environmental commitment. The technology will enhance the safe, clean, and efficient disposal of packaging waste, particularly as production scales up,” DS Smith said.

“We are also preparing to invest in other sustainable measures. The roofs in Margarethen and Kalsdorf will be extensively



renovated and modernized by the summer of 2024 for the possible installation of large-scale photovoltaic systems in later years,” the company added.

Sappi Permanently Closes Lanaken Mill in Belgium

Sappi in December 2023 ceased production of paper at its Lanaken mill in Belgium and will permanently close the plant.

The Lanaken mill is an integrated pulp and paper mill, which employed 581 workers with a production capacity of 165,000 tons per year of pulp used to produce 530,000 tpy of coated woodfree paper, which was mainly sold into the European print market.

In a press release, Sappi said, “The persistent global economic downturn is proving to be much tougher than anticipated with depressed markets, geopolitical instability and weak economic growth combining to put significant pressure on Sappi, particularly in Europe.”

Sappi said the closure of the mill site should be completed during the second calendar quarter of 2024.

“Our strategic focus includes reducing exposure to the graphic paper segment while expanding our presence in packaging, specialty papers, pulp and biomaterials. Sappi Europe is focused on building a sustainably resilient company. This requires evaluating the future of all facets of the business based on market dynamics and the market segments Sappi believe will be strongest in the future,” the company stated.

“While continuing to serve the graphic paper market through its competitive assets, the overall priority of the European business will be to grow the packaging and specialties segment specifically within flexible packaging, functional papers, self-adhesives including glassine, labels as well as dye-sublimation categories,” Sappi concluded.



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INDUSTRY SUPPLIERS

Shandong Huatai Paper Starts-up PM 11 after Rebuild by Voith

Shandong Huatai Paper and Voith Paper on January 16 successfully started up PM 11 in the eastern Chinese province of Shandong. PM 11, a former newsprint machine, was successfully rebuilt for the production of high-quality graphic paper. The machine's web width is 10.2 meters and the design speed 1,800 m/min.

As a result of the rebuild, the annual capacity of PM 11 can be increased from 400,000 to 520,000 tons.

"The rebuild has not only transformed the almost 20-year-old paper machine into a modern paper machine, but has also significantly improved the machine's stability and capacity," said Wei Lijun, General Manager of Shandong Huatai Paper.



According to Voith, the customized rebuild of PM 11 includes a variety of technology solutions with a focus on stability, reliability and efficiency. This involves upgrading the MasterJet Pro G headbox and implementing the optimization of dilution water technology to improve paper quality while reducing energy costs.

Voith also upgraded the forming section similar to the DuoFormer concept for optimum formation and higher throughput. The newly installed ProRelease+ HighEnd boxes in the pre-dryer section significantly increase the vacuum level to 3000 Pa, ensuring the stability of the paper web at high speeds and minimizing the risk of paper breaks.

In addition, a SpeedSizer AT with its uniform film application provides even and high-quality paper profiles.

By installing digital solutions from Voith's Papermaking 4.0 portfolio, PM 11 has been brought up to date, resulting in a significant increase in operating convenience and control stability, Voith said.

Kadant Acquires KWS, Producer of Bulk Material Handling Equipment

Kadant in January completed the acquisition of KWS Manufacturing Company for approximately \$84 million in cash.

KWS is a leading manufacturer of conveying equipment for the bulk material handling industry. The company manufactures screw conveyors, screw feeders, slide gates, and bucket elevators for process industries, including

the food, chemicals, and wood industries.

Located in Burseson, Texas, with approximately 165 employees, KWS had revenue of \$45 million for the trailing twelve months ended September 30, 2023.

"Our acquisition of KWS expands our respective product portfolios and enhances our internal capabilities," said Jeffrey Powell,

President and CEO of Kadant. "With our shared focus on bringing highly engineered customer solutions to process industries and our past successes working together, we believe KWS is an excellent fit with Kadant."

KWS will become part of Kadant's Material Handling reporting segment.

Valmet to Supply Suzano Aracruz Mill with New Tissue Machine, Converting Equipment and Biomass Boiler

Valmet will deliver a complete tissue production line to Suzano's Aracruz mill in Espirito Santo, Brazil. The order includes an Advantage DCT 200 tissue machine with OptiFlo headbox and Yankee cylinder, converting equipment, an extensive automation package, flow control valves and Valmet Industrial Internet solutions.

The order also includes a biomass boiler. "Valmet's state-of-the-art solutions will allow us to expand our tissue products capacity by a new production line in Aracruz mill," said Jean Moraes, Suzano's Corporate Engineering

Executive. "This meets our needs in terms of business strategy, production capacity, cost efficiency, and sustainability."

This is Valmet's first combined order for tissue making and tissue converting lines since its acquisition of Körber's tissue converting business in November 2023.

Rogério Berardi, Director, Paper business line, South America, Valmet, noted, "This is Valmet's first combined order of tissue machine and tissue converting equipment. The combination of Valmet's tissue making line, converting equipment, mill engineering,



automation systems, and flow control is ensuring high product quality while being the most efficient production line on the market today."

The new tissue making line will have an annual production capacity of 60,000 tons.

Start-up is scheduled for the first quarter of 2026.

Congratulations Christian Fischer

President and Chief Executive Officer, Georgia-Pacific

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All our accomplishments are a result of the initiative, knowledge, and collaboration from contribution minded employees at Georgia-Pacific.

”



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PAPER

■ *Georgia-Pacific* has promoted **Chris Warburton** as Chief Customer Officer for the Consumer Products Group. Prior to this, Warburton served as senior vice president of sales. In this role, Warburton will lead the organization's combined sales force for the company's retail and away from home (GP PRO) businesses.



Chris Warburton

■ *Graphic Packaging* has named **Mark Connelly** as Senior Vice President, Investor Strategy and Development. Connelly brings more than 20 years of experience as a securities analyst and strategy consultant.



Mark Connelly

■ *Metsä Group* has appointed **Pekka Kittilä** as VP, Mill Manager of Metsä Fibre's new Kemi bioproduct mill in Finland. Kittilä previously served as Technical Director of the bioproduct mill project. Additionally, **Tomi Seppä** has been appointed Project Director at Metsä Board, after which he will move to the position of VP, Kemi Board Mill as of June 1. Seppä is currently working as VP, Mill Manager of the Kemi bioproduct mill.



Pekka Kittilä



Tomi Seppä

■ *Monadnock Paper Mills* recently named **Daniel J. Burke** as the new Chief Financial Officer and Treasurer. He assumed the role following the retirement of **Andrew Manns**. Burke is a CPA and brings over 22 years of

financial management experience in the manufacturing and distribution industries. Most recently, he served as the Corporate Controller at Velcro Companies.



Daniel J. Burke

■ *Willamette Falls Paper Company* recently appointed **David Diekelman** to the role of Vice President of Sales. Diekelman brings over 30 years of paper industry experience in numerous roles, including production, business development, marketing, and sales. He takes over the position from **Mark Sterry**, who will continue with the company as its National Sales Director West.



David Diekelman

INDUSTRY SUPPLIERS

■ *Kemira* has appointed **Antti Salminen** as President and CEO, which took effect Feb 12. Salminen has held several leadership positions in Kemira, most recently as President, Pulp & Paper segment. He has been a member of Kemira's Management Board since 2011 and has a PhD in engineering. In a related move, **Harri Eronen** has been appointed as Interim President of Kemira's Pulp & Paper segment and a member of Kemira's management board.



Antti Salminen



Harri Eronen

■ *Valmet* has appointed **Thomas Hinnerskov** as President and CEO,

to become effective during the second half of 2024 – by the end of September at the latest. Hinnerskov will succeed **Pasi Laine**, who continues as the President and CEO until his successor starts. Hinnerskov joins Valmet from Mediq B.V. where he has been working as CEO since 2022. Prior to his current position, Hinnerskov was the Executive Vice President at Kone.



Thomas Hinnerskov

INDUSTRY ASSOCIATIONS

Cepi, the European association representing the paper industry, has appointed **Marco Eikelenboom**, CEO of Sappi Europe, as its new chairperson. Eikelenboom succeeds **Ilkka Hämälä**, CEO of Metsä Group, who served as Cepi's previous Chair.



Marco Eikelenboom

ALLIANCES

■ **Jeff Berg**, Vice President Operations, Voith Paper Fabric & Roll Systems North America, has been elected the 2024 Chair of the *Northeast Wisconsin Manufacturing Alliance's* Board of Directors. The Northeast Wisconsin Manufacturing Alliance is a group of manufacturers, working with educators, workforce development, chambers of commerce, and state organizations to promote manufacturing in the Northeast Wisconsin region.



Jeff Berg

APRIL 8-10, 2024**AICC 2024 Spring Meeting**

The Independent Packaging Association
 JW Marriott Desert Springs Resort
 Palm Desert, California, USA
www.aiccbox.org

APRIL 17-18, 2024**Converters Expo**

BNP Media
 Lambeau Field
 Green Bay, Wisconsin, USA
packagingstrategies.com/converters-expo

APRIL 17-19, 2024**PPC Spring Outlook & Strategies Conference**

Paperboard Packaging Council (PPC)
 Omni Frisco
 Dallas, Texas, USA
paperbox.org/event/2024-spring-meeting

APRIL 28 - MAY 1, 2024**TAPPICon 2024**

TAPPI
 Huntington Convention Center
 Cleveland, Ohio, USA
tappicon.org

MAY 15-16, 2024**Paper & Biorefinery Conference**

APV and Austropapier
 Trade Fair Congress Graz
 Graz, Austria
paper-biorefinery.com

MAY 29-JUNE 1, 2024**Pacwest Conference 2024**

IBMP
 Fairmont Jasper Park Lodge
 Jasper, Alberta, Canada
www.pacwestconference.com

JUNE 2-4, 2024**International Pulp Week**

Pulp and Paper Products Council
 Pan Pacific Vancouver
 Vancouver, BC, Canada
internationalpulpweek.com

JUNE 12-14, 2024**Latam Paper**

Intertech Americas
 Hilton Mexico City Reforma
 Mexico City, Mexico
latampaper.com

JUNE 18-20, 2024**ZELLCHEMING-Expo**

ZELLCHEMING
 RheinMain CongressCenter
 Wiesbaden, Germany
www.zellcheming.de/en/events/zellcheming-expo

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

Fastmarkets
 Renaissance Hotel Sao Paulo
 Sao Paulo, Brazil
www.fastmarkets.com/events/forest-products-latin-america

SEPTEMBER 8-12, 2024**SuperCorrExpo**

TAPPI and AICC
 Orange County Convention Center
 Orlando, Florida, USA
www.supercorrexpo.org

SEPTEMBER 17-19, 2024**Paper Meets Live! 2024**

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

**Congratulations to
 Georgia-Pacific's CEO,**

Christian Fischer

**for being named
 PaperAge's 2024
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New Approach Using Artificial Intelligence (AI) Delivers Stunning Results in Pulp & Paper

For decades, the pulp and paper industry has faced regulatory challenges over their manufacturing processes' impact on air and water. Companies have struggled to meet federal and state mandates to limit the discharge of chemicals, metals, ash, and other pollutants, particularly because they often don't know of their violations until after they occur.

This is often due to effluent treatment being considered a part of maintenance – a cost center, rather than a profit center.

But a new way to view the effluent treatment system is emerging, one that recognizes it is a biological ecosystem, which opens opportunities to proactively monitor the processing of waste – and creates ways to measure cost avoidance, which translates into a boost to a manufacturer's ROI.

Understanding the biology

The way that pulp and paper plants impact water, for instance, may be by lowering the oxygen level in a river. When there is too little oxygen in the water, plants, and fish could die.

"You've got bacteria that lives off the material that's coming into the waste treatment plant," said Gary Hopkins, IOT-MFG's CEO. "It changes the mix in the discharge so that it does not consume oxygen. If you do not take care of the biological and chemical oxygen levels, when the discharge reaches the river, it consumes the oxygen and the river's ecosystem suffers." Many mills' strategy today is to try and solve problems one section of the process at a time – the pulp mill sewer, the paper mill sewer, the clarifier, the pond, etc. Each location

has issues that can arise, such as fiber loss in the pulp mill sewer, or ash and chemical carryover in the paper mill sewer, or the settling efficiency at the clarifier, or the chemical oxygen demand/biological oxygen demand (COD/BOD) at the pond, for example.

The challenge to this approach is that the mill does not have an overview of all the conditions, metals, and chemicals that affect the sewers, clarifiers, pond, or the eventual discharge's condition. Additionally, while there are pools of data that capture the condition of the individual stages of the process, some of it resides in the distributed control system (DCS), some in localized control systems, and some is only measured by gauges and/or other local measuring devices.

The often-siloed culture within the facilities means that when something happens at the bleaching stage, for instance, the person running the paper machine usually does not get advance warning. Neither does the team running the waste processing system. This explains why, once a system gets out of compliance, it can be difficult to get it back in.

Using IIoT to Prevent Environmental Problems

An Industrial Internet of Things (IIoT) can be the cornerstone of a complete holistic view of a mill's environmental requirements.

This type of approach is emerging in the broader manufacturing industry, where numerous challenges can threaten both environmental sustainability and operational efficiency – the same issues pulp and paper mills face. Using IIoT as the architectural

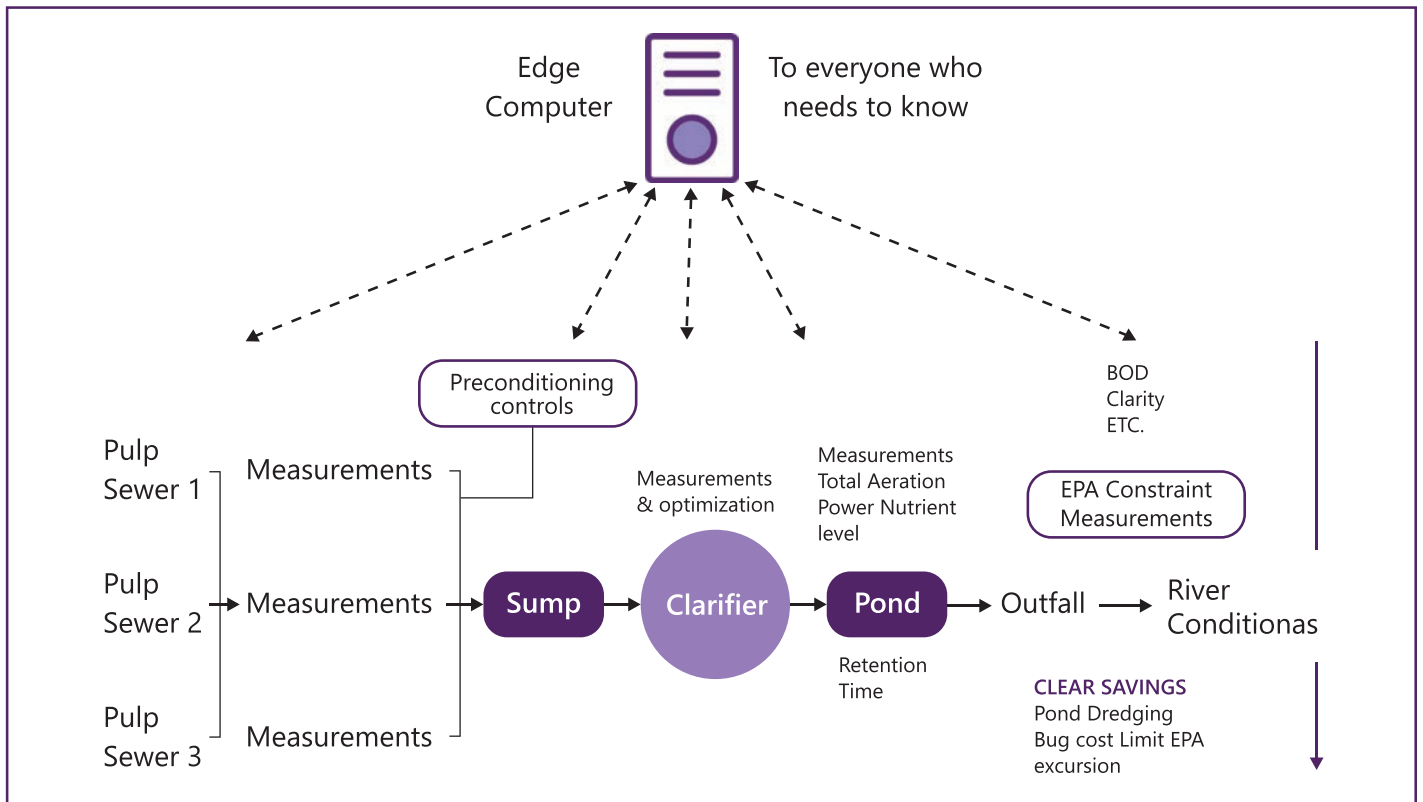
backbone provides a cost-effective way to bring all the data together in one place, or multiple places, such as PI, the cloud, and/or a manufacturing execution system (MES). This can generate a holistic view into the mill's overall operation; it can also look at how the various areas of the mill are performing individually and how the different areas interact with each other.

Over time, machine learning-based tools will provide alerts and recommendations for how individual stages of the process should react based on the operations of other upstream stages at the mill. For instance, advance information concerning the various metals, chemicals, and fiber levels entering the waste treatment area will allow for preemptive controls to meet the outfall requirements.

The IIoT Solution Exists Today

IoT-MFG, which specializes in industrial IoT (Internet of Things) solutions for the pulp and paper industry, and solutions integrator Radix have announced an AI-based Industrial Environmental IoT (IEIoT) solution that holistically addresses the environmental health in pulp and paper mills.

This solution merges IoT-MFG's sensors and analytics platform for controlling effluent solids levels with Radix's AI technology intelligence and solutions. Together they deliver human-machine interface (HMI) dashboards that identify root causes and the location of deviations that could negatively affect downstream processing and outfall.



The solution tracks multiple sensors and components that measure COD/BOD, ensuring a complete data picture of the mill's environmental health. It monitors all the mill's process sewers and clarifiers, all the way to the pond or river. It reports in real time whether each section of the mill is compliant, and what is causing any non-compliance.

There is plenty of legacy equipment that this approach can utilize. Even remote gauges that are not currently equipped to send data can be retrofitted with a battery-powered transmitter. IoT-MFG can create an IOT mesh network that connects to the sensors and transmits data and insights through a 900-megahertz mesh network. This infrastructure makes it more cost-effective to add additional readings, and less complex in remote locations.

Partnering to Boost Sustainability

With a strong focus on results, people, and long term relationships, Radix developed projects in more than 20 countries worldwide by providing consulting, engineering, operations technology, and digital solutions that drive operational efficiency, production, and cost and revenue goals.

Radix combines key capabilities and practices to enable our worldwide industrial and non-industrial customers to thrive in their digital journey.

"Most paper mills and other industrial sites sometimes need to focus on improving their effluent system. There are certain components they must focus on because they are measured environmentally, but they don't optimize holistically across the effluent system," said Elliott Bell, Radix's Global Head of Pulp and Paper.

This partnership provides instrumentation, analytics and

global screens for a site-wide HMI that promotes root cause analysis in the performance of the effluent system equipment, as well as identification of the production area within the mill that is adding to the issue.

By partnering with Radix, IoT-MFG deepens the focus on providing sustainable practices and solutions that enhance ecosystem resilience. For more information, please contact us at contact@radixeng.com or ales@iot-mfg.com.



Know More at radixeng.com

ND Paper Completes Massive Overhaul of Rumford Mill in Maine



Workers put the finishing touches on the new lime kiln stack at ND Paper's Rumford Mill

ND Paper in the fall of 2023 wrapped up an historic outage at its pulp and paper mill in Rumford, Maine.

"This outage was a massive undertaking and we are excited for a more efficient and more productive future," ND Paper said.

The company noted that throughout August and September of 2023, the Rumford mill received a deep-cleaning, some much-needed TLC, along with several major repairs and significant projects that took place throughout the mill.

"This outage is a significant milestone in ND Paper's commitment to operational efficiency and safety and approximately 1,000 contractors were on site performing

various functions," ND Paper explained. "Unlike the simultaneous annual outage, a cold outage involved a complete shutdown of all equipment and electricity. This pause in production allowed our team to make critical repairs and replacement on typically inaccessible machinery."

The cold outage spanned nine days (September 5-14) and included major steam, air, water, electrical and sewer system repairs. All four boilers were taken offline, allowing for the execution of 88 work orders focused on steam system leaks and valve issues.

In addition to the cold outage, the Rumford Mill's annual outage took place and noteworthy repair items included an annual

shutdown of liquor cycle components, replacement of the turbine generator rotor, and the replacement of the lime kiln stack.

Also, the liquor cycle was out of operation for 6 weeks for several capital projects. These projects include replacement of the Recovery Boiler Superheater and Left and Right Lower Furnace Walls, Precipitator T/R Upgrade and ID Fan Rotor Replacement. This surpasses the typical 12-day annual outage duration, ND Paper pointed out.

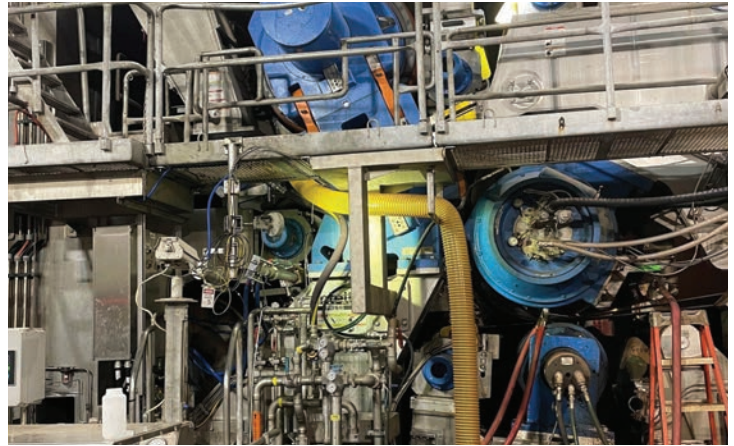
A notable enhancement within the liquor cycle was the installation of the Smelt Runner, the second of its design being introduced in North America.

The Lime Kiln Stack, rising high above most of the facility, was also replaced.

“There were significant holes and rust in sections of the stack, so the entire column was replaced,” the company said.

ND Paper emphasized that it is excited for the future.

“We expect the Rumford mill to be more productive, more efficient, and more capable than ever before.”



Upgrades at the Rumford Mill included a new shoe press on the R15 paper machine.

About the Rumford Mill

The Rumford Mill has one pulp dryer and 3 paper machines. The mill has the capacity to produce 120,000 tons per year (tpy) of market pulp (northern bleached hardwood kraft), 215,000 tpy of coated and uncoated freesheet, and 300,000 tpy of packaging paper. The facility employs 530 full-time people. ■

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Unified industry voice on Capitol Hill. Earlier this year, more than 50 industry leaders, including employees representing the Pulp and Paperworkers' Resource Council, met with 550 Members of Congress and Administrative officials, explaining how certain regulations threaten mill modernization efforts.



Taking Action on Advocacy to Shape Our Industry's Future

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

As we step forward into 2024, it is abundantly clear the paper and wood products industry stands at a critical juncture – where our advocacy will give shape to policies significant in our future.

The reality we now face is multifaceted. Amid a presidential election year, political divisions remain high.

Meanwhile, regulatory burdens threaten our industry's innovation, economic progress and environmental advances.

This includes global and trade issues adding further layers of complexity to our industry's landscape. Issues that could jeopardize access to essential and sustainable paper products.

However, within each of these challenges also lies opportunity for meaningful advocacy engagement.

When we combine the voices of industry leaders with AF&PA's policy expertise, we unlock the potential for even greater outcomes in 2024.

What unites us, and at the heart

of our advocacy efforts, are core principles including sustainability, safety and environmental stewardship.

Right now, at the federal level, there is a growing regulatory burden threatening U.S. manufacturing, including EPA air regulations.

This is why it is critical we speak with a unified industry voice on Capitol Hill. The latest example of this advocacy was in partnership with the Pulp and Paperworkers Resources' Council (PPRC).

Earlier this year, more than 50 industry leaders met with 550 Members of Congress and Administrative officials, explaining how these regulations threaten mill modernization efforts. The PPRC also detailed how current federal policies run counter to sustainability goals that make our industry a leader in U.S. manufacturing.

Congressional leaders need to hear this message from you. Get started by signing up for our grassroots alerts. Text the word PAPER to 855-566-1412. Once registered, you will receive the latest advocacy alerts delivered directly to your phone via text message.

These alerts will also keep you updated on the latest policy actions in your home state, like extended producer responsibility (EPR) proposals that include paper and paper-based packaging.

EPR is an issue that continues to be

debated in several states with very real impacts for paper recycling's success. Your work in our industry helps demonstrate why paper recycling is proven and effective with continued investment in recycling technology and infrastructure.

Your advocacy voice also extends well beyond domestic concerns to global issues like the European Union's Deforestation Regulation (EUDR).

Policymakers in the US and abroad need to understand that the paper and wood products industry is a leader in promoting sustainable forest management. For example, as a condition of membership, AF&PA members are committed to sustainable forest management and sourcing wood from responsibly managed forests.

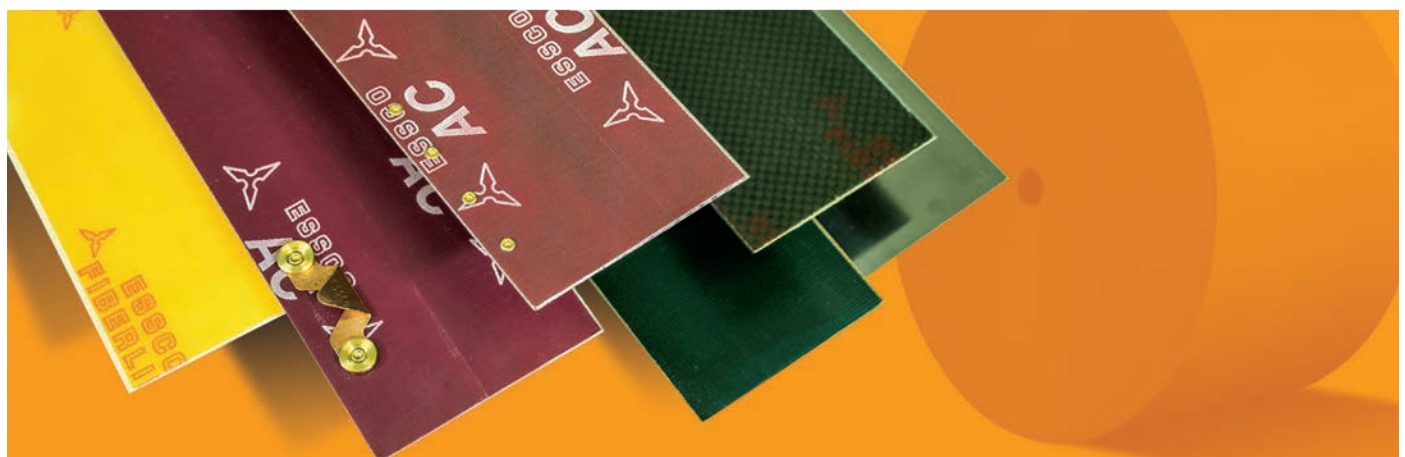
In the year ahead, it will be imperative that we actively participate in shaping EUDR policy conversations to

safeguard our industry's value chain critical to the circular economy.

We can advocate as an industry through our sustainability leadership. This year will be another important milestone in demonstrating this sustainability leadership through the *Better Practices, Better Planet* initiative as we provide a progress report on our 2030 goals.

Together let's seize upon the many opportunities 2024 presents. By working as advocates for our industry, we can shape a more sustainable future.

Now, I ask that you take the next step and join me in these efforts. Visit our website (www.afandpa.org) where you can stay engaged on key policy issues. Sign-up for our AF&PA Delivered newsletter and download our 2023 annual report — which documents the many ways that a united effort through advocacy strengthens our industry. ■



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Working Collaboratively

Whether reinvesting in its operations, empowering employees, giving back to the communities where it operates or partnering with customers, Georgia-Pacific continues to focus on reaching mutually-beneficial outcomes in everything it does.

By John O'Brien, Managing Editor



About Christian Fischer

In addition to English, Christian Fischer speaks German, Portuguese and Spanish. He assumed his current role as President and CEO of Georgia-Pacific in 2017. He previously served as executive vice president of the packaging and cellulose segment, responsible for GP's containerboard and kraft paper, corrugated packaging, bleached board and cellulose (pulp) businesses for seven years.

Mr. Fischer serves on the board of the American Forest & Paper Association (AF&PA). He is also a member of the Metro Atlanta Chamber of Commerce board of directors and The Board of Councilors for The Carter Center.

Christian Fischer has been with Georgia-Pacific for over three decades, and a lot has taken place at GP since he joined the company in 1989 within its containerboard business in Europe.

One such event took place late in 2005, when Koch Industries acquired GP for \$21 billion, changing its status from a public company to privately-owned. The deal transformed the way GP managed its business, importantly, allowing management to reinvest significantly more cash into improving the company's manufacturing facilities – a strategy that Fischer continues to apply today.

In 2023, Georgia-Pacific reinvested approximately \$2 billion back into its business and manufacturing operations. The investments – both large and small – included capital improvement projects launching and completing new facilities and enhancing existing operations.

Beyond manufacturing, the company's involvement with its workforce, such as various training opportunities, a scholarship program for children of employees, along with the GP-developed "Save My Life Digital Work Process," which was recently recognized with an AF&PA Leadership in Safety award, are just some of the note-worthy qualities instilled at GP.

Last, but certainly not least, Georgia-Pacific's support of the communities where it operates through generous donations, and employees volunteering their time for charitable programs, are all highly-regarded actions to be proud of.

Considering the admirable job of reinforcing the fundamentals that continue to drive Georgia-Pacific's success, PaperAge has selected Christian Fischer as our 37th Executive Papermaker of the Year.

PaperAge (PA): I understand that your first step into the pulp and paper industry started in Germany while you were looking for a job to help you get through college.

Christian Fischer (CF): My first introduction to the cellulose business was in 1984 working in Germany for Riocell, a Brazilian pulp company, to help put myself through college.

PA: When and how did the opportunity to join Georgia-Pacific come about?

CF: After five years of learning about all aspects of business, and ultimately leading the office, I got the opportunity to join the cellulose business at Georgia-Pacific in Europe. At the time, I had many voices that told me I was making a mistake, but I was excited about the new challenges and opportunities that working for Georgia-Pacific

would bring – the company had just acquired the Brunswick cellulose mill and was expanding into Europe.

In 1992, I relocated to Atlanta and held various sales roles managing different regions and had the opportunity to join the containerboard business, which eventually led to overseeing the company’s packaging and cellulose segment in 2007.

PA: How would you describe your management style?

CF: In my role as CEO, one of my primary responsibilities is to help employees understand our company vision and how they can create the greatest contribution to Georgia-Pacific and society by applying Principle Based Management, which is the framework with which we approach everything we do. I aim to lead with my passion to apply our Principles in all my actions across the organization in the pursuit of the company’s vision, always guided by the respect for the rights of others, for the individual, and seeking mutual benefit.

I try to be realistic about my own strengths and embrace that I don’t have all the best knowledge and really focus on what is in my and the organization’s control, by being open to others’ ideas and always striving to do better, by building personal and organizational knowledge and by seeking help and learning from others.

PA: A former CEO of GP, Pete Correll, many years ago emphasized that the company ‘is getting closer to the consumer.’ In today’s fast-changing world, how do you continue to do so?

CF: Focusing on our customers is a core part of our vision as a company and building relationships is an important aspect of this. In order to seek better knowledge around what consumers value, we have to develop partnerships



“I try to be realistic about my own strengths and embrace that I don’t have all the best knowledge and really focus on what is in my and the organization’s control, by being open to others’ ideas and always striving to do

better, by building personal and organizational knowledge and by seeking help and learning from others.”

– Christian Fischer



with our customers to figure out what they really prefer and how they value our solutions versus other alternatives. Teams across the organization continue to focus on these efforts and build capabilities that leverage more robust data to help us understand consumers better. We leverage knowledge networks, utilize technology like AI to carry out and test products that will resonate with consumers, and reinvest capital back into our businesses to ensure we provide the best products possible to differentiate Georgia-Pacific in the marketplace.

PA: What are the more prominent consumer trends in the tissue and towel markets?

CF: There are three trends that come to mind: quality, affordability and sustainability. Consumers are still looking for differentiation when they shop for

tissue and towel brands. Many want a quality product but are now looking for an elevated experience at a better value given the current inflationary environment. Others may desire premium qualities but want to purchase products which they consider more sustainable.

PA: Do you actually tailor certain brands to satisfy consumers’ varying needs/desires?

CF: Our Angel Soft® brand has provided better experiences for consumers through product differentiation while keeping costs affordable. The brand offers the same consumer choices to have different product experiences like choosing between our standard product which is soft and strong, our ultra rolls for a more premium experience still at a great value, or scents which provide an affordable elevated experience, to the introduction of a longer lasting roll that has to be changed out less often.

For the more sustainable minded consumer, the Quilted Northern® brand launched paper packaging in 2023 for its Ultra Soft & Strong line of bath tissue. This innovative paper packaging helps consumers reduce their plastic waste and makes the recycling process easier because it is curbside-recyclable. When looking at the larger impact this will have within the industry, the innovation



REINVESTING \$2 BILLION

Georgia-Pacific made several investments large and small across its businesses. The projects listed below are large initiatives valued at approximately \$100 million and up.

Green Bay, Wisconsin – \$550 million

A project at Georgia-Pacific's Broadway facility in Green Bay, Wisconsin includes a new tissue paper machine and an expansion to the plant of about 600,000 square feet.

Jackson, Tennessee – \$425 million

Georgia-Pacific is building a new Dixie® plant. The new facility will significantly increase the supply of disposable tableware products – namely, plates and bowls, while supporting its retail and away-from-home business.

Sweetwater, Texas – \$325 million

In October 2023, Georgia-Pacific opened its new gypsum wallboard production facility in Sweetwater, Texas.

Darlington, South Carolina – \$175 million

Georgia-Pacific completed a \$175 million expansion of its Dixie® tableware facility in Darlington, South Carolina.

Halsey, Oregon – \$150 million

In December 2023, Georgia-Pacific announced a \$150 million investment in its Halsey, Oregon, tissue mill, which will increase production capacity for high quality bath tissue.

Pineland, Texas – \$120 million

Georgia-Pacific's Pineland Lumber is now the largest sawmill in the South due to a \$120 million investment.

Monticello, Mississippi – \$91 million

In 2023, work began on a \$91 million upgrade at Georgia-Pacific's containerboard mill in Monticello, Mississippi, to create greater efficiency in the delivery and processing of logs and wood chips.

is expected to help reduce plastic usage by 500,000 pounds each year and truly showcases how our employees are creating value for consumers, our customers, our company and society.

PA: I read about the employees at GP's Brewton, Alabama, containerboard mill working together and sharing knowledge across varying departments to make the recovery boiler project (Project Phoenix) so much more than just a successful installation. How does GP foster a culture of contribution-motivated employees?

CF: At Georgia-Pacific and Koch Industries, our Principle Based Management framework is made up of proven principles of human progress that help foster the success of our employees and sets our culture apart from other organizations. It enables our employees to focus on where their passions and abilities overlap with areas that create value for the company. This requires everyone to be contribution minded, be willing to seek knowledge and alternative points of view, and experiment and apply new technologies or ideas.

PA: It's safe to say that the mill team at Brewton found great success applying GP's principles to the project.

CF: Our containerboard facility in Brewton, Alabama, is a great example of how our principles, when put into practice, can create



Georgia-Pacific's first manufacturing line for its new padded mailer was built in Tolleson, Arizona, and officially began production in June of 2020. The innovative product has exceeded expectations. GP's 1 billionth EarthKraft™ recyclable padded mailer rolled off the production line at Tolleson in June of 2023.



Georgia-Pacific's integrated packaging business is one of the largest producers of containerboard and corrugated packaging.

value beyond one project. By applying our principles of knowledge sharing and collaboration, the team at that site transformed how they interacted together and was able to create greater value not just at that mill, but in the industry. As a result, the Brewton mill not only became our most competitive containerboard mill, but the EPA also named it as the first integrated pulp and paper mill in the United States to achieve an Energy Star certification. Great things happen when you have a culture that fosters collaboration.

PA: And while we're talking about operational efficiency, GP has a Technology Group that offers collaboration between production sites. What is this about and how does it work?

CF: Georgia-Pacific's Collaboration and Support Center (CSC) helps our manufacturing sites be more efficient and make our equipment more reliable. Instead of collecting data manually, the team at the CSC leverages AI powered sensors to discover the potential for equipment failure and anomalies before they happen, which allows our manufacturing employees to spend their time solving problems and make better informed business decisions with less risk. The sensors produce real-time data and feed information to the CSC for review, resulting in less unexpected downtime, generating higher productivity and safer work environments in our facilities.



GP's 'Save My Life Digital Work Process' transforms the permit-to-work model from "stop, think, and ask" to "start when certain," ensuring that both prevention and recovery controls are in place before beginning

PA: The American Forest and Paper Association (AF&PA) awarded GP a 2023 Leadership in Sustainability Award – Safety for the 'Save My Life Digital Work Process.' Tell us about this program.

CF: It's an honor to have our organization be recognized for implementing a process that helps keep safety top of mind. The Save My Life Digital Work Process was specifically developed for our more than 20,000 manufacturing employees as a tool to help in reducing the risk of serious injuries and fatalities across our operations. Shifting away from the traditional permit-to-work model to a new thought process and permitting standard has helped transform how we view and execute hazardous work in our facilities. The new process is part of our commitment to the aspirational goal of zero injuries and utilizes technology to put the best information in front of employees when they need it, so prevention and recovery controls are in place before beginning high-risk work.

PA: In regards to sustainable manufacturing, what is GP doing to reduce its use of natural resources?

CF: We're always looking for ways to create more value for our customers while using fewer resources. As an industry

leader in responsible manufacturing processes, Georgia-Pacific is committed to ensuring the continued growth and conservation of our natural resources and constantly transforms to reduce waste and control emissions across our operations. In fact, the EPA has recognized many of our operations for the work being done to consume fewer resources.

PA: I've read about a number of GP mills earning the EPA's ENERGY STAR certification.

CF: As I previously mentioned, our containerboard mill in Brewton, Alabama, was the first integrated pulp and paper mill in the United States to achieve an EPA ENERGY STAR certification, but we also have another first to attain such a status, our cellulose mill in New Augusta, Mississippi, was the first pulp mill in the country to achieve the same award.

In 2022, the facilities combined have saved enough energy to power over 150,000 homes for a year, and both have been certified by the EPA for three years. Additionally, seven of our mills have been recognized with ENERGY STAR Challenge for Industry awards for reducing our energy intensity by greater than 10 percent in less than five years. Our parent company has even been named partner of the year four times by the EPA, which recognizes the excellent work being achieved by Georgia-Pacific and Koch employees at our manufacturing sites. These accomplishments are a result of the valuable contributions being made by our employees and highlights the impact they have beyond our organization.

In what ways does GP give back to the communities where it operates?

CF: The most impactful ways we contribute to the communities we operate in are through our economic impact, by being

good stewards of the environment and partnering with our communities. We encourage our people to build relationships, create meaningful connections and make a positive difference in their communities in ways that are mutually beneficial.

Many of our employees volunteer their time with Habitat for Humanity, an organization Georgia-Pacific has partnered with for more than 25 years, helping families build and improve



Christian Fischer pitches in with employee volunteers from Georgia-Pacific to put the finishing touches on a new home as part of Atlanta Habitat for Humanity's affordable housing program.

the places they call home. We support education, sponsoring STEM programs and partnering with local schools to enhance learning opportunities. Our legal team even donates their time and legal services pro bono in partnership with organizations such as the Veteran's Consortium to provide free legal counsel to veterans that need help with upgrading their discharge status in order to access VA benefits like basic healthcare they need.

By empowering everyone to achieve their potential, we believe we can create stronger communities and change lives for the better. This is what we consider being a good neighbor, or a preferred partner with the community. ■

International Paper's Vicksburg Containerboard Mill Selected for Carbon Capture Pilot Program

The U.S. Department of Energy (DOE) Office of Clean Energy Demonstrations (OCED) announced up to \$304 million in funding for four projects to pilot transformational technologies designed to capture carbon dioxide (CO₂) in Kentucky, Mississippi, Texas and Wyoming.

Nonprofit research institute RTI International was selected for award negotiations to lead the carbon capture pilot in Mississippi in collaboration with International Paper (IP), SLB and Amazon.

"We're excited to work with DOE and our partners at IP, SLB and Amazon to implement RTI's non-aqueous solvent (NAS) technology to reduce carbon dioxide emissions," said Vijay Gupta, senior research engineer and the project manager at RTI. "Our goal is to illustrate the safe, responsible and effective use of this carbon capture technology to help drive its adoption in the pulp and paper industry, and to demonstrate how strategic partnerships can accelerate industrial decarbonization."

A first-of-its-kind for the pulp and paper industry, the pilot will be at IP's Vicksburg Containerboard Mill. The project aims to capture 120,000 metric



Artist's rendering of a Direct Air Capture CO₂ removal system. Image courtesy U.S. Department of Energy (DOE).

tons of CO₂ per year, an amount equivalent to the annual CO₂ emissions of nearly 27,000 gasoline-powered cars, and direct it to a site for permanent geologic storage.

Phase 1 of this pilot project will conduct a front-end engineering design (FEED) study for a carbon capture system at IP's containerboard mill. If successful, subsequent phases would lead to permitting, construction and operation of a carbon capture plant.

The four-party collaboration includes the technology developer (RTI), the technology deployment partner (SLB), the host site (IP's Vicksburg Containerboard Mill) and the end user (Amazon). The project will provide IP and Amazon with long-term testing data on carbon capture performance and emission control, as well as a techno-economic analysis of CO₂ capture through RTI's NAS technology.

"Our ability to accelerate the transition to net zero will heavily depend on

how quickly we can improve the economic viability of these types of carbon capture projects across multiple industries,” said Frederik Majkut, senior vice president of carbon solutions for SLB. “We’re excited to collaborate with these leading companies to prove the potential of this critical technology at scale.”

Pulp and Paper Industry

RTI noted that the pulp and paper industry currently produces 48 million metric tons of CO₂-equivalent emissions per year in the U.S., plus an additional 100 million metric tons of CO₂-equivalent emissions per year from related biogenic emissions.

Sophie Beckham, chief sustainability officer, International Paper, commented, “As part of our Vision 2030 goal to accelerate the transition to a low-carbon economy, International Paper is excited

to explore a first-of-its-kind carbon capture system at our Vicksburg Containerboard Mill. We believe this project has the potential to deliver

As part of our Vision 2030 goal to accelerate the transition to a low-carbon economy, International Paper is excited to explore a first-of-its-kind carbon capture system at our Vicksburg Containerboard Mill.”
—Sophie Beckham, chief sustainability officer, International Paper.

significant benefits to the local community, our employees and the environment. We look forward to engaging with stakeholders throughout this project development process and to the establishment of a Community

Advisory Council with membership inclusive of disadvantaged communities.”

This project includes a federal cost share of up to \$88 million across all phases and aims to spur private-sector follow-on investment, aid the adoption of the technology, and meet DOE’s decarbonization goals for the industrial sector. The demonstrated technology can then be replicated across the pulp and paper industry. This project builds on previous DOE carbon capture research and development into RTI’s NAS technology, funded through the DOE Office of Fossil Energy and Carbon Management.

RTI International is an independent, nonprofit research institute dedicated to improving the human condition. Our vision is to address the world’s most critical problems with science-based solutions in pursuit of a better future. ■

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Tube Thickness Prediction Application Improves Boiler Performance and Maintenance



By René Weinhold for Valmet

The development of a tube thickness measurement program began as a thought to create more structure, and finished as an interactive application in Valmet's Customer Portal. Prolonged lifespan of boiler tubes, control over maintenance costs and prevention of unplanned shutdowns are only some of the gains.

The thought of a systematic approach to the measurement of thickness in boiler tubes was developed in 2014 as a result of too many excel sheets with differentiating measurement points, making it hard for both the customer and Valmet personnel to make qualitative analyses of the scattered data.

“With a systematic measurement program, the goal was to create a clear structure to help customers foresee the future development of their boiler tubes and help prevent the risk of unplanned leakages and shutdowns,” explains Anders Edsand, Senior Product Engineer Agreements, Maintenance Specialist, Valmet.

Through internal discussions and cooperation between different functions at Valmet, the project got started and demanded both analysis of customer needs, development of data handling and creation of interactive visuals. Edsand explains the motivation behind the development. “How can we create a system that prevents leakages, erosion, corrosion and potentially unnecessary changes of tubes through changes in mechanics, processes and performance?”

The successful teamwork resulted in a user-friendly application with an illustrative summary of boiler wearing spots in Valmet Customer Portal, easily accessible for both the customer, Valmet Inspectors, and product and maintenance engineers.

From Scattered Data to Preventative Customer Actions

The initial step when joining the measurement program is importing historical data from the customers previous tube thickness measurements into the application, to summarize the critical points where future action is needed, up to 5 years ahead.

A Valmet inspector will conclude an initial analysis of the imported data and propose a written action plan in the application. Every year ultrasonic inspections will be performed by Valmet or a third party, providing new data input to the application via a pre-defined template. Signs of corrosion or flue gas channeling/erosion, fuel usage, temperatures and unstable combustion are also considered during the inspections and taken into the analysis for the best proactive decisions ahead.

“If there are signs of erosion, a proactive solution might be to strengthen that part of the tube with tube shields to prevent both an unplanned leakage and change of tubes. Furthermore, a change of fuel or temperature might show effects of corrosion down the road, but the application allows us to see the effects early on and propose preventive actions to prolong the lifespan of the tubes,” says Edsand.

Solid Foundation for Future Customer Development Plans

The Tube Thickness Prediction Application has been up and running since 2014. The new version of the application has created great interest by Valmet’s customers and is a big improvement providing all parties with a clear visual overview and a system that provides reliable information for analysis and preventive measures.

If a customer already has a Service Agreement with Valmet, the data from the application will be an important discussion point and input for the future development of the whole plant.

“The application will move forward with continuous improvements for optimal usage, together with our customers,” Edsand concludes.

About Valmet Customer Portal

The Valmet Customer Portal allows customers and Valmet’s experts to collaborate, share information and innovate together in real time. The online services, functionalities and usability of the portal have been developed together with customers to provide useful, personalized content. ■

For further information about the subject matter presented in this article, contact: Sofia Forslund, Marketing Manager, Valmet, Sofia.forslund@valmet.com



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AI, Manufacturing, and the Next Big Step in Operational Efficiency

By Gokul Gopakumar, VP of Technology and Business Development, SUN Automation

Whether it's the latest converting machines, corrugators, conveyors, robots, or the software integral in managing operations today, they collectively form the solid foundation on which AI builds and evolves.

Editor's note: The following article was originally published by AICC, The Independent Packaging Association.

Less than 80 years ago, producing a single corrugated box required the effort of several individuals and took several minutes. Today, thanks to high speed flexo machines, a printed and slotted box takes less than 200 milliseconds, showcasing a remarkable leap in efficiency and quality.

Initially, automation focused on streamlining box manufacturing itself. Now, for the first time, we possess tangible technology capable of automating entire box plant operations. This is the promise of AI: leveraging existing structures to propel businesses further. It represents the natural evolution in the industry. The power of Artificial Intelligence is harnessed through the electromechanical and software technology already in place. Whether it's the latest converting machines, corrugators, conveyors, robots, or the software integral in managing operations today, they collectively form the solid foundation on which AI builds and evolves.

Is Artificial Intelligence for box plants and corrugated? Yes. The struggles we have today in our industry around labor shortages, skill gaps, supply chains, and global competition are universal. Other industries have more market pressure to become early adopters like automotive and financial services, but the solutions they produce will apply to us as well.

Is now the right time? Yes. For 2 reasons: It will not be cost-prohibitive given the value it offers. What this means is that the combination of investing in IoT (which includes sensors and connectivity options) and AI, as well as the decreasing costs and widespread availability of cloud computing resources, has made it much more feasible and affordable for small to medium-sized businesses to adopt and benefit from these technologies. In simpler terms, it's now easier and more cost-effective for smaller operations to use advanced tech

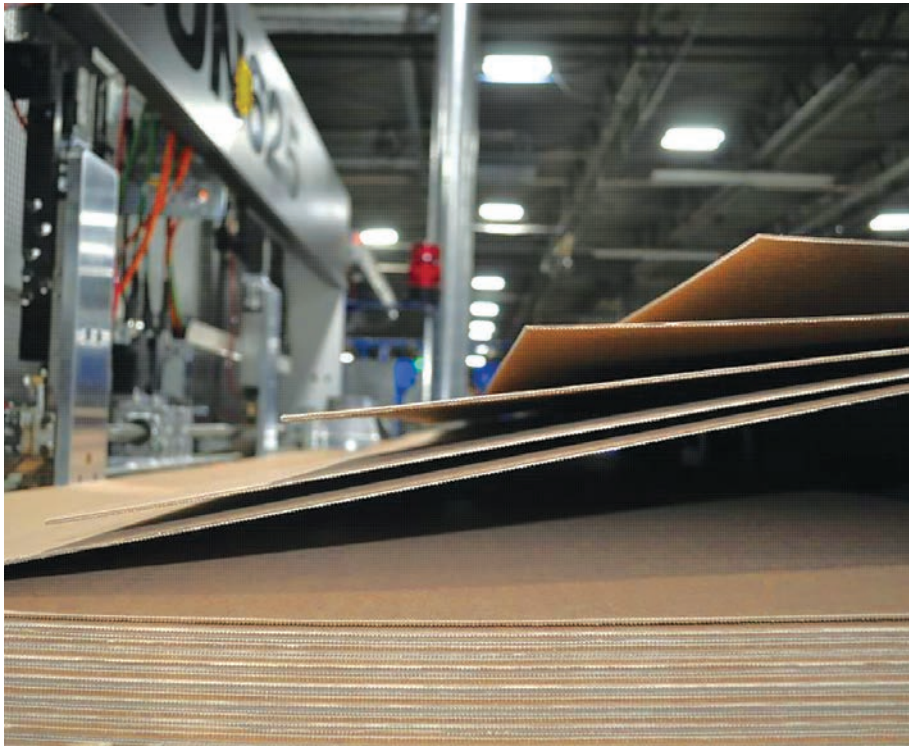


Automation like Robotics and newer equipment deliver efficiencies, but they also deliver a data source that previously has not been cost effective or useful to harness.

like IoT and AI, thanks to the reduced prices and greater accessibility of cloud services. There was a time when servo technology was expensive and unreliable but now it is on every new machine.

The second reason to consider is that investing in AI can be compared to saving for retirement. Just as beginning your retirement savings early can lead to significantly larger gains due to compound interest, starting to implement AI technology sooner rather than later can lead to vastly greater advantages as the benefits accumulate over time. This is because all Artificial intelligence models need good-quality data.

It's no secret that over the past 10 years, Artificial Intelligence (AI) has brought many innovations like augmented reality (AR) and virtual reality (VR) solutions to the manufacturing shop floor. VR headsets or smart glasses help manufacturers work with suppliers to troubleshoot a machine immediately, without the delay of travel time, shop visits, and sometimes even training. This technology has also led to predictive maintenance on machines. Digital twins help manufacturers speed up training and product development processes. With the high volume of new machine installations in the past few years, these technologies have become standardized and will continue to be part of the future.



The power of AI is that it is not making this recommendation based on a set rule but rather from a learned understanding of the typical use of the machine, the type of orders you're running, the actual sensor feedback and historical failures.



Quite a few of the more exciting and flashy AI tools we have seen this past year are the result of deep learning models. We've seen how chat-based tools and other commercially available ones can make a huge difference in packaging design both in creativity and time to market.

Machine Learning: Tools that Supplement and Supercharge Current Operations and Talent

- ▣ Augmented Intelligence
- ▣ Learned Algorithms

Deep Learning: Autonomous Intelligence

- ▣ Generative AI
- ▣ Acts Independently

Machine Learning

Automation like Robotics and newer equipment deliver efficiencies, but they also deliver a data source that previously has not been cost effective or useful to harness. If you collect and connect this data with the right AI tools you get that first layer of intelligence: Augmented Intelligence. The tools used to leverage this data and provide results fall under the technical term machine learning. Machine Learning (ML) focuses on the development of algorithms and models that enable computers to learn from

without explicit programming. The key parameter is unlike everything we have today in the box plant because the algorithms are not written out by programmers but are learned.

Systems like these can significantly improve both productivity and reliability. For example, an ML system can bring to the attention of maintenance and operations the need to replace specific wear items (predictive maintenance) and, given authority, even order the part automatically so you are not fighting lead times. We all know how critical the feeder transmission is on a traditional machine. With the right sensors and the application of machine learning, a system can predict the transmission failure weeks in advance — giving the operations team ample time to plan downtime and proactively change it. To be fair, there was a time when experienced and skillful maintenance

techs could do the same based on their knowledge. But that is a hard skill to find today, and machinery has also changed significantly in the past decade making some of that knowledge obsolete.

Let's take the example of machine learning models deployed for machine reliability. The power of AI is that it is not making this recommendation based on a set rule but rather from a learned understanding of the typical use of the machine, the type of orders you're running, the actual sensor feedback and historical failures. It's like having that hard-to-find machine maintenance expert make recommendations. True AI learns without the need for added engineering as long as it's given input and enough resources (computing power), it will learn from its mistakes quickly.

Similarly, it can suggest (like an experienced operator) how best to run a certain order to maximize output and quality. This is where the augmented portion is truly transformational for box plants. With systems like this there can be a 20% or more increase in OEE, 30% or more in quality, with 30% or so decrease in overall costs. That is the impact this technology has had in early adopters in other industries¹.

Box plant general operations is another area where AI tools can have a profound impact.

Deep Learning

ArtificiQuite a few of the more exciting and flashy AI tools we have seen this past year are the result of deep learning models. You may have heard of generative AI — creating images, video, and sound that are new and unique based on basic direction. We saw at AICC Louisville how chat-based tools and other commercially available ones can make a huge difference in packaging design both in creativity and time to market. Broadly, one could say that these tools



Where we can start to see the value in box plants is in sales, marketing, design, and administrative tasks. We are going to have access to AI tools that take good meeting minutes and distribute them with insights. Or combine several spreadsheets, analyze, and summarize the data in minutes without being an Excel wiz.

will transform the front office first before it hits the production floor and machinery. The biggest players today are OpenAI (Microsoft backed) and DeepMind (Google backed).

Where we can start to see the value in box plants is in sales, marketing, design, and administrative tasks. We are going to have access to AI tools that take good meeting minutes and distribute them with insights. Or combine several spreadsheets, analyze, and summarize the data in minutes without being an Excel wiz. The key is autonomous intelligence technology acts independently of human input, taking over manual and cognitive tasks that require fast adaptation to new data. Think of this as automation for people's tasks. It will change our workforce but also give us options to better align with our goals. Our sales teams can engage more freely with customers without laboring

over documentation. Our production teams can spend more energy tackling long-term and larger challenges and efficiency without worrying about how to better run the 20 orders in the queue. By and large the big impact here is in eliminating small tasks that are time and labor-intensive.

¹ Reference: www2.deloitte.com/us/en/insights/industry/manufacturing/manufacturing-industry-outlook.html

Acknowledgements

Artificial Intelligence (AI) is a powerful, emerging technology that will have a major impact on the operations of AICC members and their customers. To educate members on AI, AICC formed the Artificial Intelligence Sub-Committee that is comprised of the following members: Jeff Putt, DeLine Box & Display; Greg Tucker, Bay-Cities; Guy Ockerlund,

OxBox; and Gokul Gopakumar, SUN Automation. AICC thanks these members for sharing their time, their experiences, and their ideas with their fellow AICC members.

About AICC, The Independent Packaging Association

AICC is a growing membership association which serves independent corrugated, folding carton, and rigid box manufacturers and suppliers with education and information in print, in person, and online. AICC membership is for the full company and employees at all locations have access to member benefits. AICC offers free online education to all members to help the individual maximize their potential and the member company maximize its profit. To learn more, visit: www.aiccbox.org. ■

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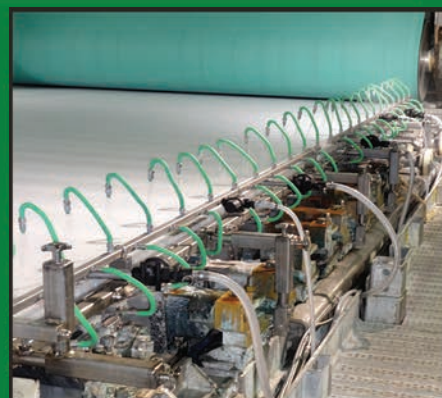


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PaperAge

Europe's Paper and Board Sector Impacted by Lower Level of Demand, High Production Costs in 2023

Suffering from an adverse macroeconomic context, production of pulp and paper in Europe has experienced a decline in 2023. It was due to several compounding external factors: a poor economic environment, destocking and still high energy costs, as shown by the Confederation of European Paper Industries (Cepi) preliminary statistics report published in February.

With mid-term global economic trends impacting the demand for paper and board and exacerbating destocking, consumption fell by 15.3% in 2023 and, in turn, production in the paper and board industry suffered a second consecutive year of contraction, decreasing by 12.8%. After a year 2022 marked by sky high energy prices, the decrease in production in 2023 continues to be more pronounced even than it was during the Covid-19 crisis (-4.7% in 2020).

These global trends have been worsened by the comparative high costs in Europe for production inputs, and notably energy, which cost continues to be unsustainably high. This is illustrated by Europe's domestic paper and board production contracting more than in many other world regions, where decreases ranged between -2% and -10%. But, in a globalized low demand context, both imports and exports diminished equally, and Europe's pulp and paper's trade balance remains by



Europe's pulp and paper producers were adversely affected in 2023 due to several compounding external factors: a poor economic environment, destocking and still high energy costs.

far positive, as it is one of the top EU manufacturing sectors by this measure.

Packaging Paper and Board

Traditionally an engine for growth in the sector, the production of packaging paper and board in Europe has also continued on a downward trend, with consumption decreasing by 12.2%. The segment has suffered from a slowdown in retail and e-commerce figures having reverted back from pandemic levels. This in turn impacted the consumption of paper for recycling (-7.3%), as paper-based packaging in Europe is predominantly made of recycled material.

Graphic Paper

Graphic paper, which includes printing and writing paper, saw consumption drastically decrease (-27.5%). This can only partly be explained by longstanding trends towards more digital content,

as destocking effects could possibly account for up to half of the decline. Within this category the book sub-segment remained resilient.

Tissue

Sanitary and household paper also appeared much more stable than other segments, with a limited decline of -3.7%. These are still benefiting from societal trends favorable towards hygiene products, with 'at home' markets including tissues and toilet paper performing better than 'away-from-home' markets, more impacted by inflation and sluggish private consumption.

Pulp

Finally, Europe's pulp production also declined less steeply than overall paper production, by 7.5%. The decrease in the production of this 'processed wood', which is the primary raw material for making paper and board, is to be attributed to a high number of closures of graphic paper mills which were also producing pulp. The production of market pulp grew by 4.8% in 2023 as capacities went full speed and benefited from a strong demand from China.

Editor's note: A PDF copy of Cepi's 4-page preliminary statistics report can be downloaded from PaperAge's website: www.paperage.com/2024news/Cepi-Preliminary-Statistics-Report-2023.pdf

Cepi is a Brussels-based non-profit organization representing the European pulp and paper industry. ■



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