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FRANCE

Face mask recycling finds its way in France

Face masks have become a key tool in the fight against the Covid-19 pandemic but they are also proving a major new source of pollution, with used masks seen littering streets, countryside and waterways across the world. Now, a French start-up believes it has a solution.

Plaxtil, a firm in Châtellerault, France, started recycling face masks, turning the potentially hazardous waste into useful products.

Plaxtil was launched in November 2019, and specialises in recycling clothes by turning them into a plastic-like material – also called Plaxtil. When the Covid-19 pandemic hit, it switched to recycling masks instead.

First, the masks are collected and placed in "quarantine" for four days. They are then ground down into small pieces and subjected to ultraviolet light to ensure they are completely decontaminated before the recycling process begins.

The process starts with collecting used masks, grinding them down, mixing them with a binding material and transforming them into a material called Plaxtil, which can be used in industry and molded like normal plastic.

Plaxtil says the masks could be turned into a vast array of different objects, but for the moment it is turning them into products that can be used in the fight against Covid, such as plastic visors.

The first biodegradable masks made in France

In the last two years, the mask has been part of our daily life in the fight against the coronavirus.

This accessory must be changed every four hours and ends up abandoned in the city and often ends up in the gutters. A real danger for the environment.

The single-use mask has become an ally against the spread of the coronavirus but also an enemy of the planet.

To respond to this environmental crisis, the company CP Project, located in Carros, west of Nice, has been working on an alternative to polypropylene, this plastic material that can be found in all single-use items such as single-use masks CP Project is now offering a biodegradable alternative, based on sugar cane fibers, rice starch and biobased polymers. Its CEO, Philippe Lopez, explains: "Our goal is to ban plastic from our lives and we decided to start with this plastic material that is found in all single-use objects in the medical or agri-food sector, polypropylene. There are masks but also charlottes, which are taken for jellyfish by turtles when they are found in the oceans. "

The CP Project team and its partners will release a first version of biodegradable "type 2ER" surgical masks which will meet the EN14683 standard which have bacterial and viral filtration greater than 98% and splash resistant. ". They are made from biobased polymers, sugarcane fibers and "rice starch for the nasal bar," says the founder. Even the sachet in which they are sold is made from ecological products, in vegetable ink.

A second version will arrive in January 2022 "even more environmentally friendly". Due to lack of funds, the manufacture of the first masks made in Asia will now be carried out by the French group Lemoine, a leader in the design of hygiene products.



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SPAIN

Albaad Group Acquires Spanish Wet Wipes Manufacturer Optimal Care

Albaad Group, manufacturer of wet wipes and tampons, announces the acquisition of the Spanish wet wipes producer Optimal Care. The company will become the "Albaad Iberia" division, which will be integrated into Albaad's European subsidiary in Germany. With the expansion of its presence in Europe, Albaad further strengthens its market leadership role. Optimal Care, located near Madrid, with approximately 300 employees and 60 million euros in turnover, is a leading supplier of wet wipes products in Spain, Portugal and Southern French markets. "In addition to its position in the market, we were also convinced by the good reputation of the products quality as well as customer satisfaction," says Dan Mesika, Albaad's CEO and president.

Through this acquisition, Albaad will implement its strategic plan to become the leading manufacturer of wet wipes in the European market under the leadership of Wolfgang Tenbusch, Albaad's Europe president – with key strongholds in Central EU (Germany), East EU (Poland) and now South EU (Spain and Portugal). Expanding the European coverage will enable Albaad to give better service to our customers, react faster to market needs and changing regulations. Furthermore, the company can provide better products, lower transportation costs, ensure optimized production capacity, and give more localized customer support.

Focus on sustainable innovations: "We at Albaad understand and embrace the importance of innovation as an engine that drives growth and are committed to deliver environmentally friendly products", explains Mesika. The acquisition of Optimal Care strengthens the company's capabilities in innovation and R&D. Mesika adds: "This step puts us in a position to reduce the environmental impact of, for example, logistical challenges such as carbon dioxide emissions caused by long transport routes. After all, sustainability is our top priority."

Together with Optimal Care, the company will be able to further drive the development of trendsetting products and also expand its portfolio, he added. "This will increase our effectiveness in the local market and offer our customers the best solutions," says Mesika.

Optimal Care will become the Albaad Iberia business. Mesika explains that their joint objective is to maintain its entrepreneurial way and local culture whilst aligning it within their Albaad European operation. Optimal Care becomes the Albaad Iberia business unit.

There will be no operational changes for Optimal Care customers and employees initially, he adds. "We will continue to communicate transparently throughout the onboarding process and look forward to building a stronger joint company together," Mesika emphasizes.

IRELAND

Irish-owned Zeus Packaging Announces Investment in Tissue Manufacturer Aldar Tissue

Irish-owned Zeus Packaging has announced a €15 million investment in Aldar Tissue, the Dublin based tissue manufacturer. Zeus acquired Aldar Tissue in 2019, as part of a three-year €40 million acquisition strategy which concluded in February of this year.

Zeus will invest €10 million in the construction of a new 100,000 sq. ft Aldar production facility in Rathcoole, providing a purpose-built facility to relocate and expand existing production. Located close to Zeus' headquarters and Dublin distribution center to drive operational efficiencies, this new facility will be ready early 2022. A further €5 million will be invested in two new fully automated, state-of-the-art production lines. The new facility will enable Aldar to quadruple capacity and introduce new premium brands to large retailers across the island of Ireland along with exporting to customers in the UK & Europe.

Speaking on the announcement, Zeus CEO Keith Ockenden said: "Aldar is one of only two toilet tissue manufacturers on the island of Ireland, who combined, represent just 20 percent of the market. The rest of the Irish toilet tissue market is completely reliant on import. Not only is this a negative from a sustainability perspective, it also highlights the additional challenges brought on by Brexit and the knock-on impact of high distribution costs on the consumer.

"At Zeus, we wish to remove this reliance in the Irish market on UK and European imports by strengthening indigenous manufacturers such as Aldar. Since 2019, we have worked with Aldar to improve financial performance by streamlining costs, maximizing efficiencies, leveraging economies of scale, and developing new product lines. Through this continued investment by Zeus into infrastructure and technology, Aldar is on track to becoming the largest toilet tissue producer on the island of Ireland, increasing our Irish capacity to 40 percent of market needs. This investment protects employment and brings further job creation to the area.' Commenting on the announcement, project manager of Aldar Tissues, Darren Farrell, added: "Since 2013, we have been committed to supplying high-quality products. Over the last 3 years, we have invested €4million in in world class paper converting machines, diversified our product ranges and expanded our customer base.

"This investment by Zeus will accelerate our growth path, enabling us to become the largest Irish manufacturer of own brand and private label paper products."

In February 2021, Zeus acquired Austrian-based food packaging solutions business, Petruzalek, expanding and strengthening Zeus's geographic presence across 12 countries in Western, Central and Eastern Europe. Established by Brian O'Sullivan in 1998, Zeus today employs 600 people across 26 countries. The group's turnover has grown substantially over the past three years, reaching €208m in 2020 and expected to reach €280m for 2021.

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ROMANIA

Successful start-up for the A.Celli E-WIND T100 rewinder purchased by MG Tec Industry S.r.L.

A.Celli's E-WIND® T100 Tissue rewinder supplied to the Romanian company MG TEC Industry S.r.I was successfully started up at the end of April in full compliance with the project objectives in terms of timing and product quality. MG TEC Industry is a new Romanian company founded in 2018 in the Transylvanian town of Dej. The main objective of their project is the construction of a greenfield plant focused on the development of a production line for tissue paper, absorbent products, hygienic and sanitary products. The A.Celli E-WIND T100® will be a part of the Tissue line dedicated to the production of paper with a width of 2850 mm and a basis weight ranging from 13 to 45 gsm. Thanks to the line's operating speed of 1600 m/min, it will be possible to produce up to 100 tons per day of the highest quality tissue paper.

Mr. Hasmasan Vasile, MG TEC Industry Plant Administrator, says: "Special thanks go to our operators who have successfully managed all the start-up steps despite the circumstances caused by the pandemic. The assistance of the A.Celli team was fundamental: we were able to count on excellent support both on the field and remotely, directly from Italy."

ITALY

A.Celli Group among the 2021 Sustainability Leaders

Innovation and sustainability have always been an integral part of A.Celli Group's DNA, the values that have guided many of the choices and activities in the nearly 80-year history of our companies.

The investments made in recent years, both in research & development and in the modernization of our production infrastructures, have always considered the primary goal to respect for the environment and to greater process efficiency, at the service of our customers and all stakeholders. Being selected in Italy among the 2021 Sustainability Leaders by the prestigious Italian economic-financial newspaper "Il Sole 24 Ore" and by "Statista", the renowned German platform for data collection, market research and economic-financial indicators, certifies the virtuous path that A.Celli have undertaken.

The research took into consideration over 1,500 companies operating in Italy selected for having published, in recent years, their own sustainability report (CSR report). The analysis was based on the three macro-areas of sustainability: environmental, social and corporate governance. This recognition rewards the numerous efforts made by A.Celli Group to reduce, for example, greenhouse gas emissions, promote the circular economy and support gender equality.

"This recognition is fundamental for us, as it is fundamental to continue to be committed to society and future generations. Today the A.Celli Group sees its ethical and social commitments pursued over the years consolidated by providing facts, actions and concrete answers in support of virtuous, profitable and sustainable growth" – says Mauro Celli, member of the board – "Innovating does not only mean pushing the technological level to the highest quality standards, but first of all it means configuring the entire A.Celli ecosystem to contribute to the well-being and professional development of its employees, to ensure continuity for the generations of tomorrow and to positively influence the society we live in".



A.Celli Nonwovens, Italy



A.Celli Paper, Italy

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QATAR

A new Tissue machine project in Qatar

Ontex unveiled a production line with a capacity of approximately 80 million face masks per year. Ontex's face mask production line is located in its factory in Eeklo, Belgium and already produces one hundred thousand masks per day since August.

A complete tissue plant will be installed by Overmade in a new facility in Qatar.

The project owner is kept confidential, but as Overmade announced the complete plant will be supplied by the company on a turn-key supply base: from Virgin pulper to Approach flow system, from Hydraulic Headbox to Reel, from Winding system to Wrapping line, including all auxiliaries such as Vacuum line, Steam system, High efficiency hood, Mist and Dust removal system. The DCS (Distributed Control System), the QCS (Quality Control System), the Sectional Electrical Drives and the Electrification of the entire tissue mill are also part of the scope of supply.

The new line will produce 30.000 TPD tissue, using virgin fiber. It will be equipped with a softwood and hardwood line, a water treatment, fiber recovery plant and an advanced double dilution system to feed the headbox.

The machine is the OVER CR C20, capable to produce the softest facial tissue, using the DYNAFLO-C headbox (the latest development of the DYNAFLO TWC), capable to "OVER-perform" in the fiber distribution at high consistency and to reduce the softwood needs in the paper.

The OVER CR C20 is equipped with a 4,572 mm Yankee diameter and it is conceived to work at a speed of 2,000 mpm, but it has already demonstrated to break its wall of stated operating speed on many occasions.

For many years OverMade has been serving the market with this machine size, which has shown in the years to be OverMade's feather in the cap, from Europe to South America, from Middle East to East Europe and Far East. TWENTY is the magic number of this line: 20 years from the start-up of the first OVER CR C20 tissue line (the grandfather of one of the most successful OVER tissue lines); in 2020 OverMade received this order in a market area where the OVER tissue machines are a reference point for the market. After the most recent successes in South America, North America and Europe this contract represents in fact an exciting coming back in the Middle East.

KSA

A new Tissue machine in the Kingdom of Saudi Arabia

The Saudi Paper Group (SPG) in Saudi Arabia signed a contract with Toscotec, Italy for the supply of a complete tissue line "an AHEAD 2.2S tissue machine". The new line will be installed at the Saudi Paper Mill site in Dammam, eastern province of Saudi Arabia.

The new machine will produce premium quality tissue from virgin pulp and will replace the old PM2.

The start-up is scheduled for the fourth quarter of 2022.

The new tissue machine has a sheet trim width of 2,850 mm, a maximum operating speed of 2,100 mpm, and an annual production capacity of over 30,000 tons. Designed for top performance and optimal energy efficiency, the tissue machine is equipped with TT NextPress new shoe press design, a third-generation design TT SYD Steel Yankee Dryer with patented deckle head insulation, and high efficiency TT Hood.

The supply includes the stock preparation system and Toscotec's patented TT SAF® (Short Approach Flow) featuring a double dilution system that reduces electrical consumption to a minimum. The scope also includes Toscotec's proprietary DCS system, and one OPTIMA slitter rewinder. Toscotec will provide a complete service package with detailed mill engineering, erection supervision, commissioning, training, and start-up assistance. Yousseri Abdel Hamid Abdel Aziz El Bishry, CEO of Saudi Paper Group, says, "Toscotec's AHEAD tissue machine will increase SPG's production capacity of tissue paper from 100,000 to 130,000 tons per year. It is a strategic expansion for our group, and we believe in the importance of equipping ourselves with leading-edge technology that will allow us to achieve our production targets with optimal performance and energy efficiency, delivering the highest quality to our customers."

Alessandro Mennucci, CEO of Toscotec, says, "We are very pleased to begin a new partnership with Saudi Paper Group. This project further strengthens Toscotec's position in the Middle East region. SPG will attain its objectives and fully benefit from the optimal performances, high reliability and energy efficiency of this AHEAD tissue line."

About Saudi Paper Group

Founded in 1989 as a private enterprise in Saudi Arabia, the Saudi Paper Group is composed of three subsidiaries specializing in tissue jumbo rolls manufacturing - The Saudi Paper Manufacturing Company (SPMC), tissue converting, and paper recycling. SPMC is one of the leading tissue manufacturers in the Arab World, offering a wide range of tissue products from facial and pocket tissues, toilet rolls, kitchen towels, table napkins, maxi rolls and various other tissue-related products, which it distributes to the domestic and international markets.

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CHINA

BAOSUO Group to Keep Exploring African Market

Baosuo Enterprise., established in 1989, is a well-known corporation which specializes in machinery for tissue. We uphold the business strategy of basing on domestic market and going global, which helps to lay the foundation for building our global well-known brand. Our products include tissue making machines, tissue converting machines, tissue packing machines and electric intelligent systems. We are dedicated to providing the best tissue production turnkey solution and first-class service from design, manufacturing to installation.

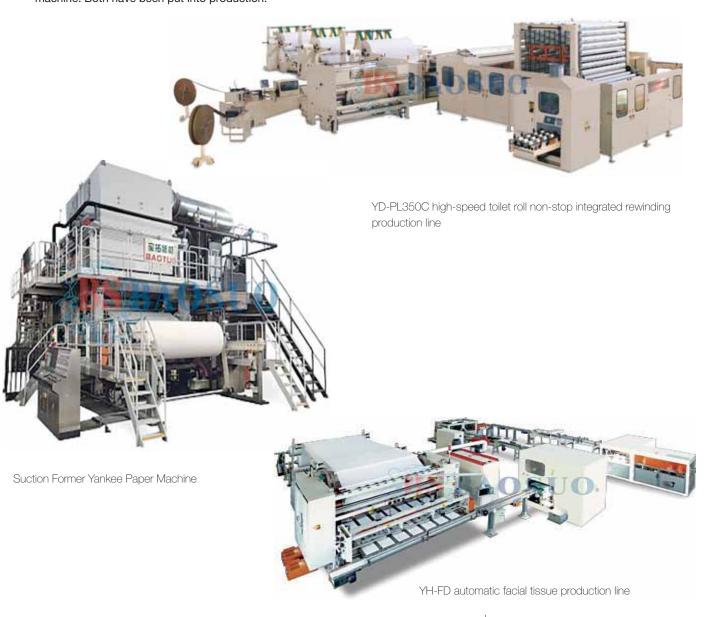
In recent years, China's "the Belt and Road Initiatives" and "Maritime Silk Road" policies have been extended in Africa. Baosuo Enterprise also closely follows the pace of this country and actively explores the African market. In terms of high speed tissue paper making machine, our company and Ethiopia's Purewood Pulp Paper & Packaging PLC And Premier Paper Mills (GQ Tissue Products (PTY) LTD in South Africa have signed a suction former Yankee paper machine. Both have been put into production.

In terms of tissue paper converting, Baosuo has also made brilliant achievements. Here are some examples in Africa.

In Kenya: Royal Converters and Baosuo signed a YD-PL350C high-speed toilet roll non-stop integrated rewinding production line

In Ethiopia: Purewood Pulp Paper & Packaging PLC and MAMCO Paper Products Factory signed a YD-PL350C high-speed toilet roll non-stop integrated rewinding production line with Baosuo; MELENS Pvt, Ltd.Co and Baosuo signed a YD-PL400C toilet roll and kitchen towel non-stop integrated rewinding production line, YH-FD automatic facial tissue production line, YC-PJ automatic napkin production line.

In the future, Baosuo Group will continue to keep a high degree of attention to Africa, to increase input in the African market, to allow China manufacturing to enter Africa, and to make a small contribution to the economic development of the African countries.



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USA

New TAPPI Board of Directors and Officers Announced

TAPPI, the leading association for the worldwide pulp, paper, packaging, tissue and converting industries, installed new officers and directors to its Board during a virtual meeting on March 2.

New Chair James R. Haeffele, Essity, and new Vice Chair, Donald Haag, Retired-Packaging Corporation of America (PCA), will serve two-year terms. New directors appointed for three-year terms are Karyn Biasca, University of Wisconsin - Stevens Point; Suzanne Blanchet, S.L.B. Inc.; and David Buchanan, Voith Paper North America.

Haeffele, who served as vice chair on the Board during 2020, ran unopposed for the 2021 chair. He is Vice President Technology, Material Breakthrough at Essity. Haag served as a director on the board in 2020 and ran unopposed as Vice Chair in this election. He formerly worked with PCA as VP of Manufacturing Services and is now retired.

Buchanan is president of Voith Paper North America since 2016, and has business line responsibility for Products and Services out of Appleton, Wis.

Blanchet worked for Cascades Inc. for more than 30 years, including as President up until June 2017, and is currently serving as a strategic advisor for different public and private corporations.

Biasca is a professor and Chair of the University of Wisconsin – Stevens Point Paper Science and Chemical Engineering Department.

These new members will join the following directors who will continue to serve on the TAPPI Board: Garnet Bremner, Nalco Water an Ecolab Company; Peter Hart, WestRock; Andy Jones, International Paper; Mark Keaten, GAF; Larry N. Montague, President and CEO, TAPPI; Kim Nelson, GranBio; and Rory Wolf, ITW Pillar Technologies. Nelson joins Jim Haeffele and Don Haag as a member of TAPPI's Executive Committee.

"We're very excited to welcome our new directors," said Larry Montague. "With their installation, our Board will now have representation from the supplier community, our growing tissue division and the academic community—all of which are vital to TAPPI and the industry we serve." Special thanks to the following TAPPI Board of Directors members as they complete their terms in March 2021: Chair Pete Augustine, Körber Tissue, and directors Carrie Enos, University of Maine Pulp and Paper Foundation, and Matt Szymanski, Green Bay Packaging.

THAILAND

Toscotec's new tissue line starts up at C.A.S. Paper Mill

Baosuo Enterprise Group provided Lee & Man Paper ManufactC.A.S. Paper Mill started up an AHEAD 1.5S tissue machine supplied by Toscotec at its Sing Buri mill in Thailand. The new AHEAD 1.5S machine has a trim width of 2,850 mm, an operating speed of 1,850 m/min, and produces more than 30,000 tpy of premium quality tissue. The machine configuration is designed to guarantee top energy efficiency with TT NextPress shoe press design, TT SYD Steel Yankee Dryer, and steam-heated TT Hood-Hybrid.

The supply included the stock preparation equipment and accessories, the patented TT SAF (Short Approach Flow) system, the fiber recovery system, dust and mist removal systems, and a complete slitter rewinder line, with dedicated dust removal system. Toscotec also provided a comprehensive service package, including the tissue machine's erection, erection supervision, commissioning, training and start-up assistance, as well as YES-CONNECT-VISION augmented reality solution for remote service. Torpong Thongcharoen, Managing Director of C.A.S. Paper Mill, said: "With this new line C.A.S. Group enters the tissue market. We are already producing high quality tissue, and we expect to kick off distribution very quickly. Throughout the entire project, including the hardest times during the pandemic, we always had a very good cooperation with Toscotec, who proved to be the experienced and skilled supplier we expected, managing the project with great flexibility and supporting us all the way to our target." Marco Dalle Piagge, Toscotec Sales Director, comments: "This start-up is a reward to us all for the hard work we put into this project in order to successfully complete it during Covid-19. This AHEAD line is designed to deliver top energy efficiency that results in low energy consumptions and low operating costs. C.A.S. Paper Mill is now fully equipped to enter the tissue market from an advantage position." About C.A.S. Paper Mill Co., Ltd.

C.A.S. Paper Mill Co., Ltd is part of the Charoen Aksorn Holding Group (C.A.S. Group). Established in 1963, C.A.S. group is a well-established paper trading company in Thailand. In 2013, the Group acquired from Norske Skog (Thailand) a newsprint mill in operations since 1994, and it was named C.A.S. Paper Mill. The company operates a pulp and paper mill situated in Sing Buri, near Bangkok, Thailand.

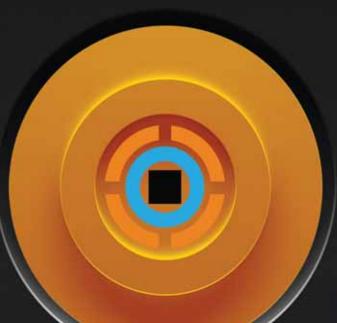


C.A.S Paper Mill, Sing Buri, Thailand

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VISION

Winding and unwinding perfect reels with maximum efficency



MISSION

Create user friendly, innovative and highly customizable winding and unwinding systems: expanding shafts, chucks, safety chucks and handling systems

VALUES

Honesty and integrity
Constant work for
costumer satisfaction
Respect and recognition
of people's value

MOD. 640 PQL POPE Pneumatic expanding shaft with ledges

shaft with ledges for non-stop machines

MOD. 714 MZ-L

Pneumechanical chuck with leaves

MOD. 200

Single column shaft puller

MOD. 700

Tilting table







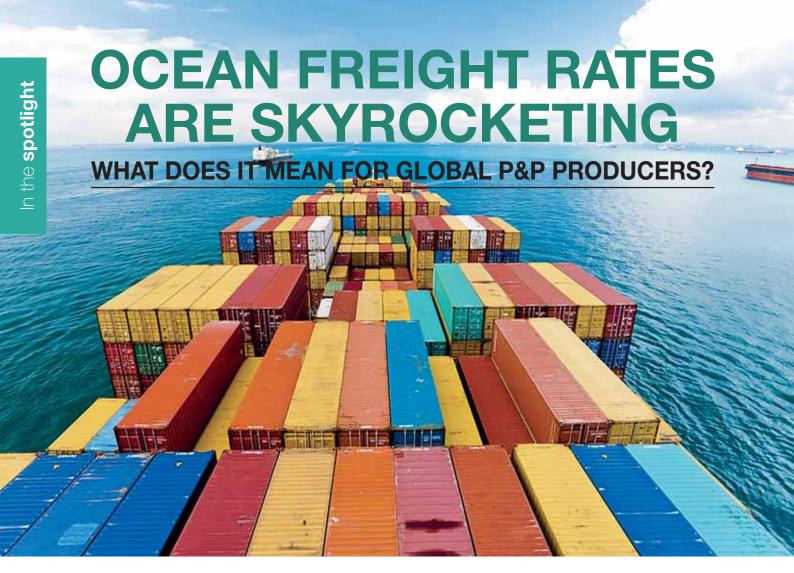












In the first quarter of 2021, the container freight market shocked the global logistics industry with soaring prices that have yet to abate. According to the Freights Baltic Index, the cost to ship one 40-foot container from China to Europe or the US west coast has now reached over USD\$8,000 and USD\$4,000, respectively. However, a year ago, the cost to ship the exact same container to the exact same places was well below USD\$2,000. Similarly, freight rates from China to South America had jumped to a jaw-dropping 443% by early 2021 - leading many to wonder the obvious: What's causing such an enormous price increase?

There are a few factors contributing to the container freight price surge, including the ongoing global recovery from the COVID-19 pandemic. With many countries lifting restrictions that were originally set in place in an attempt to control the virus, the demand for goods has surged and created a new "normal" level. The pandemic has also created a structural change in consumer behavior that could be lasting. Instead of spending money on leisure activities, traveling or going out to restaurants, consumers have been ordering more manufactured goods - creating an increase in demand for the packaging and shipping boxes - and the containers - needed to ship them.

Home improvement and home office remodeling projects due to remote work have also been new demand drivers as lockdown protocols were set in place and consumers found themselves wanting to upgrade home office spaces. This, coupled with the increased demand for containers when China resumed its production levels

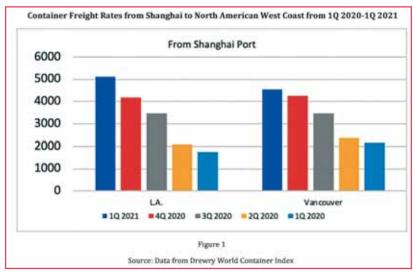
(specifically after the Chinese New Year in February), helps explain the recent rise in prices.

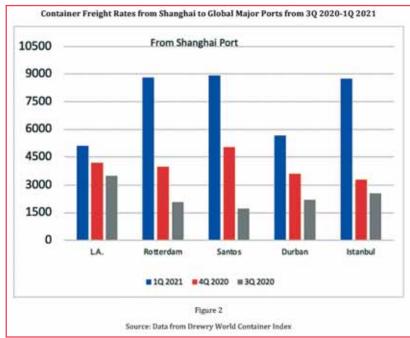
On top of the effects created by the pandemic, the blockage of the Suez Canal in March of this year aggravated the global container shipping market's already tight supply and transport schedules. Alternative routes from Asia, such as around the Cape of Good Hope, added an additional 10 days to normal transport times.

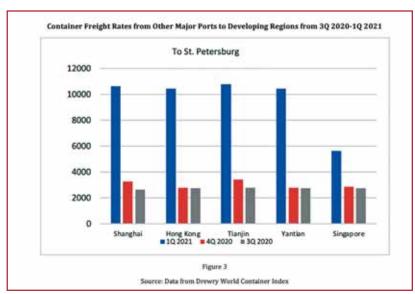
Freight rates from China to the west coast of North America have been increasing since 2Q 2020, as we can see in Figure 1, at a steady rate. However, compared to North America, Figure 2 illustrates how shocking the soaring freight rate was from Asia to other regions in 1Q 2021. The lack of return cargo has also had a significant impact as South American and western African nations import more manufactured goods than they export, which makes it prohibitively costly for carriers to return empty boxes to China on long routes.

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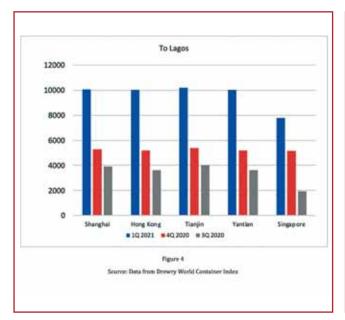
The impact of increasing freight rates has hit trading routes in developing regions the hardest. As seen in the figures below, rates to Russia, South America and Western Africa have been higher than to any other major trade region. Part of this is due to the fact that routes from China to countries in South America and Africa are often longer than others.

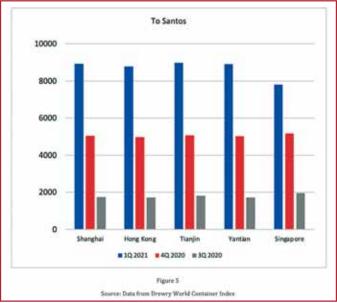






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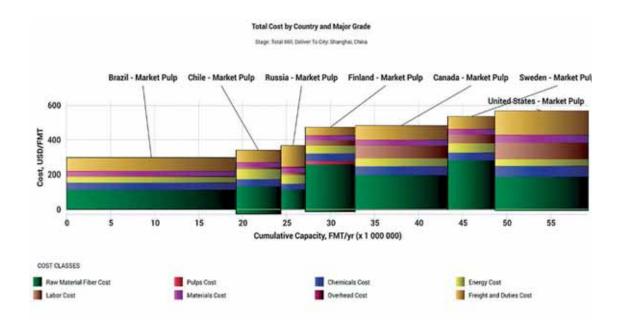




What Does This Mean for the P&P Industry?

Currently, while these freight rates are shockingly high, they are also unsustainable and are expected to decrease once disruptions from port congestion and other shortages are resolved. Fisher anticipates unchanged spot rates in 2Q 2021 due to a strong economic recovery and expects them to only start gradually returning to normal beginning in 2H 2021. These

high rates are also unsustainable due to a rapidly growing containership orderbook, especially for larger vessels around 5,000 TEU (20-foot-equivalent unit) capacity and larger.



Cost Analyses on Market Pulp Delivered to Shanghai Port in China

On the bright side, it's expected that additional global shipping capacity will restore the market's supply and demand balance. New ship orders have also been spurred by favorable conditions in the global shipping market, low prices for new larger vessels and the availability of financing.

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Marcal Fire Learnings

Rob Baron, President and CEO, Marcal Paper

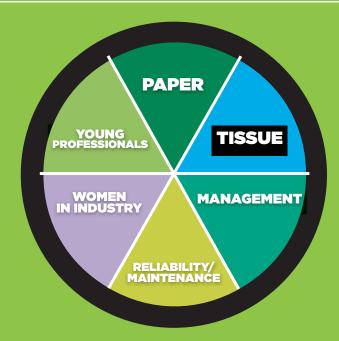
Issues with Dust Control

Alfredo Sarli, Air Systems Application Specialist, Valmet

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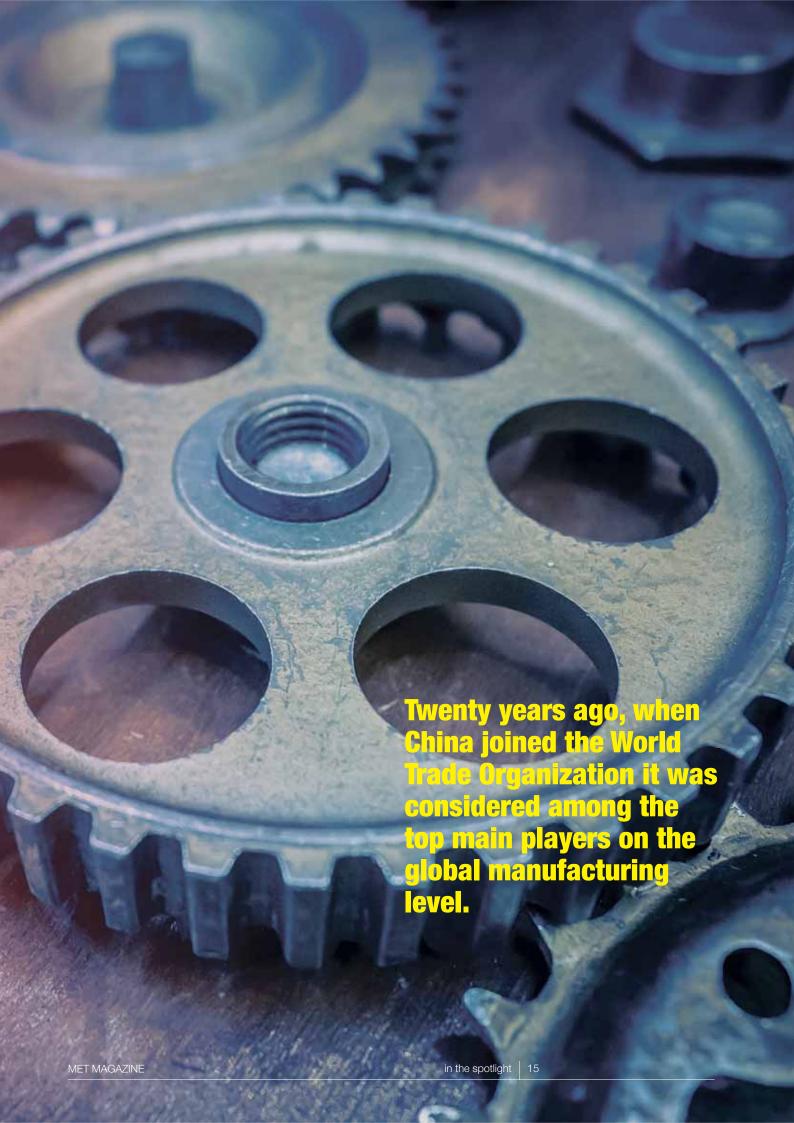
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WHAT IF CHIN STOPS MANUFACTURING?

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Since then, the reforms in its economy and the focus on manufacturing goods for export market was the main key in China's transformation into the world's first manufacturing power. China was considered the low-cost factory of the world, making labor-intensive products for companies, consumers, around the world.

Before the hit of the Covid-19, the country manufacturing power was developing, and its economy was more focused on higher-end manufacturing.

According to data published by the United Nations Statistics Division, China accounted for 28.7 percent of global manufacturing output in 2019. That puts the country more than 10 percentage points ahead of the United States, which used to have the world's largest manufacturing sector until China overtook.

During the world recovery from the pandemic, China started losing its advantage of being the low cost manufacturer on the global level; this was due to the ever increasing labor cost, the raw material shortage and the continuous increase in the ocean freight rates on top of the high consumption in domestic market is pushing China to rely on the local consumption to fuel its economy. With total value added by the Chinese manufacturing sector amounting to almost \$4 trillion in 2019, manufacturing accounted for nearly 30 percent of the country's total economic output.

What if China stops producing for the world, who will take China's place as the world's factory?

China is unevenly developed, with most of its labor-intensive manufacturing concentrated in big cities in the west. There is a possibility to face the continuous rise in labor cost by relocating the companies to more cost-competitive locations.

However, firms haven't been eager to move from their coastal hubs to mainland China, where the scarcity of industrial infrastructure could potentially curb their productivity. Efforts by China's government to encourage manufacturers to move to these areas have had limited success.

There is still a debate on whether China will stop being the global manufacture of the world and the advocates of this idea are using the fact that even the already displaced industries from the west to the low-cost provinces within China, could not help on a long term.

Keeping China as the factory of the world need strategic decisions and new investments to be made in order to upgrade the technology with a view to increasing productivity. It could be possible for the laborintensive manufacturing industries to remain in China but undergo changes in their process technology, automation, and even introducing the robotics in their manufacturing facilities. Industrial robots in China, are already used in the car and electronics industries and it can be easily introduced into other labor-intensive production facilities in other industrial processes.

If the cost of manufacturing keeps rising in China and companies don't invest in automation technology and robotics, what will happen?

It will be inevitable for foreign investments and international companies to move their production towards the low-cost Asian countries like Bangladesh, Cambodia, Indonesia, Myanmar, Sri Lanka, and Vietnam. Could be possible to move to India and further to the near east countries like Pakistan or even to the African continent.

Africa represented the natural and reliable option for the low-cost production for Europe and now China is following the same path.

China is now Africa's biggest trade partner, with Sino-African trade topping \$200 billion per year. According to

McKinsey, over 10,000 Chinese-owned firms are currently operating throughout the African continent, and the value of Chinese business there since 2005 amounts to more than \$2 trillion, with \$300 billion in investment currently in the pipeline.

Of course, the preferred path is moving to neighboring Asian countries over venturing into African countries. The latter are not the natural choice, even though, we have seen many Chinese companies in the light manufacturing industry opening their factories in Africa.

This may be partly explained by the fact that the considerable business risks accompanying a cost-driven relocation of production to African countries create a collective action problem.

Moreover, the medium and small size firms are often reluctant in leaving China because of the risk in losing their existing business networks and supply chains.

On the other hand, it is not easy, of course, for the companies to move out, despite the benefits of being next to the supply chain leaders who are always exploring the possibility of producing items closer to their end users' markets in the rest of the world, it could be difficult and expensive to abandon China and more specifically the local Chinese market.

What does it mean for the consumers in the rest of the world?

Over the past two decades, we have gotten used to buy the "made in china" products at low prices, and we have been always astonished how much prices of these goods have declined over the past 20 years.

Retailers and consumer goods manufacturers over the world have already rung the bell and they have enormous responsibilities as well as opportunities, to reinvent themselves and reimagine the future.

As consumer, we will change behavior in a fast-changing business environment all over the world.

We are entering the new era, as consumers of the world, we will not have the privilege to buy products at lower cost anymore.

MET MAGAZINE in the spotlight | 16



YH-FD Automatic Facial Tissue Production Line



- 1. High speed—the working speed is 100m/min or 10–11 logs/min. (120 sheets/log)
- 2. High work efficiency -- more than 2 times normal model. Need not people operation
- 3. Automatic separately system(inside system) -- accuracy rate is 100%. Zero waste for produced
- 4. Save space—The work efficiency is 2 times normal model but only need 1 line space. So can save the space about 30–40%.

BaoSuo Enterprise Provide You The Turnkey Solution For Tissue Production



Tissue Machine



Converting Machine



Packing Machine

Baosuo Paper Machinery Manufacture Co., Ltd.

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Why in EU and the US Protective Underwear is flying off the shelves

Adult Inco market: volumes, segments and trends

The global market for Adult Incontinence Care products is forecast to reach \$14 bn by 2023¹. In 2019, the US accounted for \$2.2 bn, with sales projected to hit \$2.76 bn by 2024². Collectively, the US and Europe represent the largest market worldwide with a combined share of 53.8% ³.

Despite the social stigma, urinary incontinence is a widespread problem. If it were a country, it would be the **third largest in the world**⁴.

As per the Global Forum of Incontinence 2018⁵, over 423 mn people, roughly 8.7% of the global population, suffer from incontinence: in the age range 20+, 303 mn are women (≈12,4% of the global feminine population), while 121 mn are men (≈5% of global masculine population).

North America accounts for 37 mn incontinent people (i.e. 9% of the population in the region) and Europe for 57 mn (9.9% of the population in the region). The purchasing drivers in the Adult Inco market are many, with **increasing longevity** in the lead: thanks to continuous progress in healthcare and life science, life expectancy keeps increasing across all countries⁶, resulting in an everwider group of people getting to old

age. Consumer awareness is equally important. Other than the ageing population, the Adult Inco market in North America and Europe is greater than in developing countries also thanks to high consumer awareness on sanitary & hygiene products⁷. That said, there's plenty of room to grow, as over 50% of people suffering from urinary incontinence are currently not being treated nor they do seek help⁸.

Last but not least, a major factor to consider is the rising focus on active lifestyles: the so-called Silver Society, is leading a much richer life than ever before in terms of experiences and opportunities. Also, the internet makes it possible to browse (and purchase) a wealth of Inco Care products privately at home.

Adult Inco market: needs and drivers

For the Adult Inco customer, discretion is paramount. As of today, although decreasing, there is still embarrassment among adults about urinary incontinence. That is why Protective Underwear has blown up. Indeed, it is perceived by the public to be akin to traditional underwear, making it the ideal solution in a market such as that of the Silver Society.

The elderly appreciate the opportunity to buy Protective Underwear from the comfort of their home and value the product as it lets them go on with their life without being much of a nuisance. Linked to this is the demand for comfort, breathability and skin friendliness. Protective Underwear is optimal in this regard, since it's slim and fits no worse than a real underwear.

In parallel, **personalisation** is quickly taking hold. The elderly are often very demanding customers and take the breadth of choice into great consideration - an opportunity that is furtherly enabled by online shops that let the customer pick a color or their favoured features among a wide variety of options. Because of this, flexibility, i.e. the possibility to change size and product, is the most important feature for Protective Underwear machines.

MET MAGAZINE market trends



AP3: GDM's Protective Underwear to tackle the Adult Inco market

To address the evolving needs of the Adult Inco market, GDM has introduced a dedicated product the AP3 line – production speed at 300 ppm.



The machine is characterized by:

- Excellent either heavy or moderate incontinence; ideal for **both standard and premium products**
- Possibility of using a wide range of raw materials for the production of different types of products.
- **Superior core quality:** technology with possibility to use different core recipes from standard core to thinner core
- Lower Total Cost of Ownership (TCO) through the highest level of OEE and reduction of material waste
- **Ease of use** and **intuitive processes** thanks to the linear layout of the machine
- **Optimate** is the new smart GDM HMI allowing machine full control, production and process support and user friendly experience
- Turn-key solution with SB40 packaging machine

Are you considering tapping into the Silver Society market opportunity? Then get in touch with GDM at **info.it@gdm-spa.it** and discover more about our AP3 machine!

¹ Source: Euromonitor

⁴ Source: Economist Intelligence Unit

⁷ Source: Future Market Insights

² Source: Nonwovens Industry

⁵ Source: GFI Forum 2018

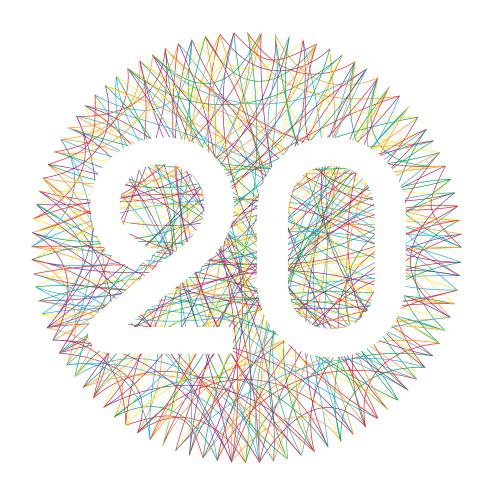
8 Source: GFI Forum 2018

³ Source: Globe Newswire

⁶ Source: Our World In Data

MET MAGAZINE market trends | 19

Where nonwoven innovations happen





19 - 22 October 2021 Palexpo, Geneva





Research and development, Manufacturing base of intelligent equipment for household paper-

China Lucca-jiangxi xiushui

Facial Tissue Folding Machine



Automatic tissue log transfer (match to interfolder on the left)



Model:5T/6T/7T/8T/9T/10T

Max. width of base paper: 1350-2100 mm Folding speed: 500-1000 sheets min/line

Start-Stop Model Toilet Tissue Rewinder



OK-250 Type Double Lanes High-speed Handkerchief Tissue Production Line



Packing Speed: ≤250 bags/min

Jumbo roll width:2200/2800mm Machine's speed:≤200 m/min

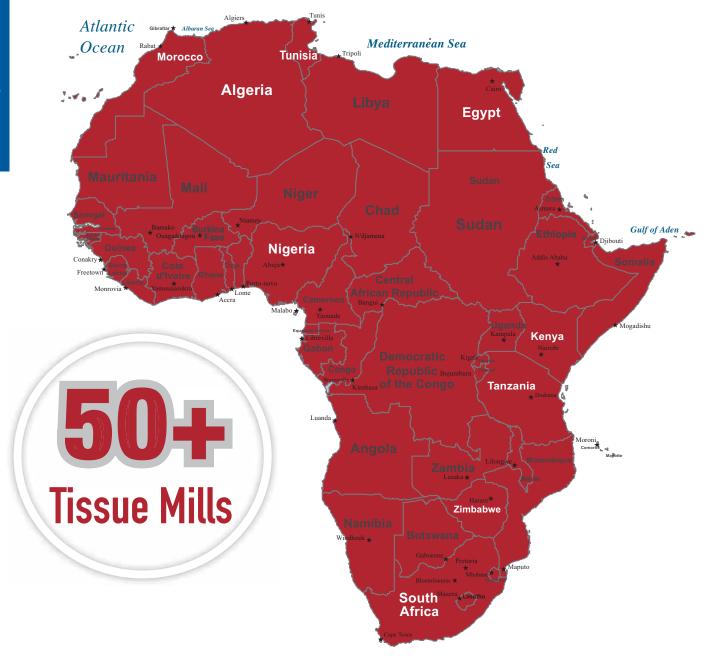
Finished roll tissue diameter: 970-150 mm



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Xiushui County, Jiujiang City, Jiangxi Province
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SUCCESSFUL PLANNING AND EXECUTION OF A NEW TISSUE MILL IN AFRICA

Defining the Business Need & Establishing Project Goals

Evaluating the decision to build and start up a new tissue manufacturing operation in Africa can be overwhelming. This task could involve the construction of a Greenfield facility, the expansion of a current operation or the addition of parent roll making capacity to an existing converting operation. In each project instance, it is essential to start with clearly established business needs and project goals that cover product specifications, grades, desired production rates, and all raw materials to be used. A business model or pro forma should be developed which typically includes

the total installed cost of the facility, as well as startup and operating cost.

This allows for an understanding of the capital sensitivity of the pro forma and the net effect on the return on investment. Understanding the capital and financing implications guides the project team towards selection of machine supplier, site location and materials of construction, as costs vary widely based on these selections.

Market Data

In the African continent, the critical initial step is to have a sound evaluation and knowledge of market needs. Some manufacturers have this capability in house and others rely on an outside consultant who is heavily experienced in the tissue paper industry and market to drive proje ct priorities and goals. This is done via studies and analysis and then refined with multiple review meetings. To that effect, market data is collected and analyzed to determine the need for product, grades, and SKU's in order to secure an "Offtake Contract" with future customers. This allows the manufacturer and potential financers to confidently proceed with scope development knowing the amount and value of the product to be sold. The long-term commercial success of these installations depends heavily on the use of validated market data in this phase of the project, and the promotion of open challenges and analysis of that data.

Company image

An often-overlooked criterion during the determination of project goals is the company image. Careful consideration of the desired company representation at this stage of the project is essential to ensure that the outcome conforms to the company image, particularly in the areas of safety, commercial representation, aesthetics, work philosophy, and environmental attitudes. By defining those objectives at this stage of the work process, the project team can ensure that the subsequent project work incorporates the end user's vision. That vision is often very specific in terms of overall look and design of the facilities, the design of the processes and the finish of building materials.

Site selection

Site selection is one of the key elements for a successful long-term operation. For all tissue paper manufacturing applications there are four critical requirements:

- Water in enough quantity and quality
- An adequate and trained labor force
- Sufficient electrical/petroleum-based energy
- Cost effective transportation of raw materials (e.g., pulp and chemicals) to the site as well as products from the site to the planned market

Within the site selection activity, several variables need to be studied concurrently. The major physical scope blocks required at the site for example will have a significant impact on layout and required area. Effective layouts of a paper making facility allow for the most efficient flow of the production starting with delivery of raw materials through shipment of final product to the market. Unit operations such as boilers, compressed air system, wastewater treatment equipment, stock preparation and raw material storage, Tissue paper machine and ancillary equipment, parent roll storage, converting, and finished product storage will have a significant impact on layout and more importantly on the efficient flow of material and employees in the facility. The accessibility of railroads, ports, and highways can also significantly impact facility layout. In addition, the strategy for the handling of solid and liquid waste generated from the process will also have an impact on the arrangement of equipment. Conversely, provisions for future expansion have to be accommodated in terms of process design and capacities of existing systems. Once a site has been qualified as meeting the business requirements, it is important to obtain a geotechnical report of the areas of the site that will

be affected. This will allow the civil/ structural engineers to determine if the soil is suitable for construction and the type of foundations or piling that will be needed to support the weight of the structure and equipment.

During site selection utilities are another major concern and should be addressed as part of the site selection criteria. Natural gas supply lines for example are costly to install if not available near the site. The same applies to power supply, water, and sewer lines. All requirements should be quantified as pre-work to the site selection process as the potential sites are evaluated against these criteria. An in-depth knowledge of the environmental regulations early in the site selection process can greatly assist in paring down the potential site list. Obtaining the necessary environmental permits can be the critical path for the project and should be initiated early. Embedded in this activity is an in-depth knowledge of water and air discharge requirements for a potential site based on historical data and the prior experience of the execution team. Depending on the jurisdiction, obtaining the required permits can take lengthy periods of time, even after applications are submitted to the regulatory agencies. In some cases, drawings will need to be filed with the application to indicate the location of the sources, along with unit operations' nameplate data and constituents of the emissions.

Project Scope Definition

The scope definition work process is split into 3 distinct phases

- Feasibility
- Conceptual
- Definition





During feasibility the project team works to generate decision making information by considering and evaluating the metrics of the project. The intent is to juxtapose needs with affordability, quality, risk management, operability, maintainability and availability. Alternatively, during the conceptual stage the team evaluates multiple options in order to eliminate options that are deemed too costly or otherwise undesirable. Once options have been selected and the major unit operations have been identified, the project transitions into the definition phase. During this phase equipment are typically specified, layout drawings are completed, and P&IDs are developed. The project scope of a new tissue machine facility is based on five main pillars: the product and its specifications, raw materials, utilities considerations, environmental requirements and constraints, and financials. A qualified engineering firm can lead a methodical scope development process based upon commonly defined goals. All scope options should be studied while incorporating costs associated with construction, utilities and operations. During the feasibility and conceptual phases of the project, the execution team relies on previous paper machine experience to assemble project scope as it relates to these five pillars. For example, the type of furnish dictates the unit operations associated with the pulping and stock preparation areas of the plant. Recycled office waste requires deinking systems and increases water usage and the amount of sludge that will need to be disposed. Environmental requirements, on the

other hand, can place restrictions

on the amount of water used and discharged, thereby requiring a closed water system. This in turn increases chemical usage for the facility.

Review and agreement

The careful tracking of progress along these phases is done via weekly project review meetings. These are attended by project managers, engineering staff, procurement staff, schedulers, project controllers, construction managers, construction companies, and the end user. Effective review meetings require agendas, meeting notes, and the careful review of in progress deliverables which include specifications, drawings, and schedules. 3D modeling is a very effective tool used in review meetings as it allows clear visual understanding by operations and maintenance staff. The feedback provided by these important stakeholders can then be incorporated into the design.

Schedule

An obvious key element in the success of a project is the schedule. When building a tissue paper manufacturing facility, the following must be considered when establishing the schedule:

- a. Product to market timing
- b. Long lead equipment
- c. Permitting schedules
- d. Hiring and training of staff
- e. Construction sequence
- f. Turnover and start up

Whereas the procurement of long lead equipment typically drive the schedule on capital projects, in the case of tissue paper manufacturing careful

consideration must be given to the timing of product release in the market, especially in those instances where advanced product orders are used to secure capital funding for the project. In those cases, several tools can be used to accelerate the schedule. Expediting equipment and the use of temporary or skid mounted equipment for example can shorten lead times and secure earlier production dates. Conversely, sequencing construction packages and therefore construction can ensure the maximization of efficiency in time utilization while maintaining the progress of the project. An oftenoverlooked component of the project schedule is permitting. Depending on the jurisdiction, permitting authorities often require as much or more time than what is required for equipment delivery. As such, after establishing the work breakdown structure, it is essential to identify and schedule all critical path items including permitting. In most instances, establishing communication channels with regulatory agencies, either directly, or through specialized agencies, not only accelerates the approval process, it also creates a collaborative relationship between those agencies and the project execution team, which often result in a shortened and less contentious permitting process.

Project execution strategy

After the flow balances are complete, and equipment has been sized and specified, a project procurement plan is typically developed. Equipment delivery lead times are integrated into the project schedule. This will help to identify critical path items and drive the decision dates required to keep

the project on schedule. Integral to the procurement plan is a cash flow analysis that includes timing of purchases and payment schedules. This analysis is critical to maintain an advantageous cash position whether the project is financed by the end user or outside investors and banks. In addition, the procurement plan should incorporate warranties, transfer of custody, spare parts management processes as appropriate. End users in this process are required

to have honest internal discussions regarding preferred project execution strategies. Central to those discussions are end user familiarity with these projects as well as their risk tolerance. In those cases where the end user prefers to defer risk and reach a high level of control over project cost, a Lump Sum Turnkey (LSTK) contract strategy should be pursued. For this approach to be successful a detailed and complete front-end engineering package is an absolute requirement. This will be the central mechanism to maintain control over scope. Furthermore, this will enable an effective competitive bidding process where contractor tenders are comparable in scope and material of construction. On the other end of the spectrum, end users could choose to separate the engineering, procurement and construction scopes and use a Time & Material contract strategy. This approach will allow for more control and involvement by the paper manufacturer. This strategy requires more end user involvement, which in turn requires a larger project management, procurement, construction management and contract management staff. More

A business model or pro forma should be developed which typically includes the total installed cost of the facility, as well as startup and operating cost.

importantly this execution strategy shifts the risk from the contractors back to the end user. To mitigate that risk, effective mechanisms to control contingency and undefined scope are required.

Construction

To ensure that constructability is taken into account during the engineering phase, construction professionals are included in the project team from the inception of the project. The insight that these professional will provide, ensures the appropriate consideration of materials of construction, rigging, construction methods, and modularization that can then be properly incorporated into the design of the facility. This collaboration consistently results in project savings and schedule acceleration through increased efficiency. This is particularly relevant for paper machine projects where the installation of large pieces of equipment, such as head boxes, dryers, and requires the input of experienced construction managers.

Operator/Maintenance training plan

It is important to schedule the onboarding of trained operators and maintenance personnel during the detailed design phase of the project. Their input is valuable as the equipment and processes are defined. If staffing is available from another company site, it is advantageous to utilize that staff to lead the training for the new facility. This group can be charged with developing the detailed training material for operating equipment, the startup/ shutdown procedures of the various process systems, and the on-going maintenance documents. This team can also conduct the formal training of new employees.

Start Up/Commissioning and Verification

The paper machine and all of the associated components are typically assigned to specific process systems. All equipment, valves, piping, and specialty items related to a single function are incorporated into a common system. For example, a forced oil lube system on a tissue machine will include the oil pump(s), cooler,

oil reservoir, filters, piping/hoses, and control valves. Once those systems are identified, an overall plan can be developed to sequence the start-up of each of these systems in order. This is done so that new systems can come online for the first time in a sequence that allows adequate priming and minimizes risks of contamination or conflict. This is particularly relevant for steam systems. Formal commissioning and verification of each system validates that the process/equipment is operating per the given design range as well as determines key operational set points. This phase of the project provides data that is used to validate performance warranties from key suppliers, as well as fine tune the production capabilities of all manufacturing systems.

Engineering and Equipment Document Turnover / Maintenance files

In order to ensure an appropriate document control and management process throughout the project, a plan will need to be put in place during the front-end engineering process. This plan should prescribe a strategy for the electronic maintenance of files prior to the purchase of any equipment, or instrumentation. The information and drawing requirements as well as file type (AutoCAD, or other) should be specified and made part of the purchase contract. A document control system should be created early in the project to receive and file information and drawings as the project progresses. If the project is designed using a 3D model, a decision needs to be made as to the long-term maintenance, storage and access of this tool. This should be in place and operational well before starting up so that engineering and maintenance drawings are available as needed for the successful startup and operation of the new paper making facility.

A new tool in the virtual reality could be used, but unfortunately, this is not the way most of the projects are started in Africa!



"Amotek, yes we are!"



THE ANSWER TO YOUR NEEDS

Currently, Amotek's leadership team has two professionals who have been with the company for many years: Massimo Zanotti, Director of Technology, and Michele Mike Solazzo, Director of Sales & Service. A short interview has been conducted with them to give a closer view of the company and their ongoing projects.

What is the recipe for Amotek's success?

Solazzo: We have listened to our customers' feedback and worked on common projects with our business partners to ensure that we are always ahead of the game in packaging solutions. We continue investing in R&D and Human Resources to offer faster and more energy efficient machines based on the requests and expectations of the main market players for the years to come.

Which technological innovations have been adopted on Amotek's machines against Covid-19?

Zanotti: The process of digitalization on all of our packaging solutions has accelerated during the spread of Covid-19. This allowed us to manage the start-up and commissioning of machines remotely, opening new possibilities that our partners have greatly appreciated. All of Amotek's machines have been then

equipped with the latest IT and digital technologies that make the human machine interaction experience as easy as using a common smartphone.

How are you meeting the increasing demand for sustainability?

Zanotti: Speaking of recent years, thanks to fruitful collaborations with tissue converters and bag manufacturers, we have developed new sealing systems that allow



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our machines to seal **paper** and **biomaterial bags**, ensuring high performance and manufacturing quality packages.

What are your latest solutions for the packaging of tissue products?

Zanotti: These innovations have been applied to our latest machine for toilet rolls: the PB192 Series with its fast and easy size changeover, its flexibility in using different packaging materials, and its u e of IoT for proactive and immediate maintenance and service. The ability to pack a range of products is one of the key features of our IS220 Series, making it the perfect packaging solution for interfolded tissue as well as

multipack nonwovens products. This bagger reflects perfectly the company philosophy in terms of versatility and flexibility, it grants in fact many format and presentation range, modular infeed concept and the possibility to execute single and multiple layer configurations. This machine is currently very appreciated for its reliability as based its technological concept on the top seller Amotek bagger.

Would you like to add something regarding Amotek attendance to the coming shows?

Solazzo: Due to the pandemic, we have been waiting a long time to attend shows and have the opportunity to

meet with our partners. During this period, Amotek never stopped thinking forward and worked hard behind the scenes to develop new ideas. I'm really glad to have the possibility to extend an invitation to everyone who wants to come and finally meet our team at the MIAC show in Lucca as well as at INDEX show in Geneva and learn more about Amotek's tissue packaging solutions. We look forward to welcoming you at our stands!



IS220 packaging execution

PB192 packaging execution

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INDEX™20 maximises opportunities with October date extension and hybrid format

The INDEX™20 Organisers, PALEXPO and EDANA, have decided to adopt two important measures;

The first is to announce that INDEX $^{\text{TM}}$ 20 is postponed until 19 – 22 October 2021. The second is to introduce a comprehensive virtual platform for INDEX $^{\text{TM}}$ 20.

Tissue and Paper Bangkok 2021

Informa Markets Singapore, the organizer of the Tissue & Paper Bangkok, has decided to reschedule the upcoming 2021 event following extensive consultation with exhibitors, industry partners, delegates, speakers and taking into consideration the impact of the COVID-19 pandemic on the industries. The event will be rescheduled to Wednesday 24 - Friday 26 November 2021 at the Bangkok International Trade and Exhibition Center, Bangkok.

Tissue World Düsseldorf 2021

Tissue World is moving to Düsseldorf from September 21 - 23, 2021, Messe Düsseldorf, Düsseldorf, Germany.

Paper Arabia rescheduled to 05-07 December 2021

Due to ongoing covid-19 situation, majority of scheduled exhibitions have been postponed, Organizers of Paper Arabia had to reschedule their event in collaboration with venue management. Keeping in mind safety concerns of exhibitors as well as visitors, Paper Arabia 2020 is postponed. The new dates will be from 05-07 December 2021.

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JULY

12-15 | Atlanta, USA

World Of Wipes

14-17 | Shanghai, China

SINOCORRUGATED

19-20 | Shanghai, China

FILTREX™ Asia

22-24 | Shanghai, China

Anex/Since 2021

OCTOBER

3-6 | Atlanta, USA

TappiCon Live

13-15 | Lucca, Italy

MIAC 2021

19-21 | Orlando, FL, USA

ICE USA

19-22 | Geneva, Switzerland

INDEX 21

27-29 | Bangkok, Thailand

ANDTEX 2021

AUGUST

11-13 | Shanghai, China

China Internatioanal Paper

Technology

NOVEMBER

15-18 | AZ, USA

Hygienex

SEPTEMBER

4-6 | Cairo, Egypt

Paper Middle East

9-11 | Dhaka, Bangladesh

Papertech Expo 2021

21-23 | Düsseldorf, Germany

Tissue World 2021

28-29 | Online

Virtual RISE 2021

30 | Brussels, Belgium

Circular Nonwovens Forum

15-16 | AZ, USA

24-26 | Bangkok, Thailand

Tissue & Paper Bangkok

DECEMBER

5-7 | Dubai, UAE

Paper Arabia

EXENS 2021 CALENDAR

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PAPER-ME / TISSUE-ME / PRINT2PACK 2021









The 13th International Exhibition for Paper & Paperboard Tissue & Hygienic Products Packaging & Printing Industry

4,5,6 September - 2021

Egypt International Exhibition Center (EIEC), Cairo-Egypt

Media Partners:













Organized By:





GLOBAL WIPES COMMITTEE

The newest venture within NETInc Division

With many advocates around the world, Wipes are still a controversial item for many, especially in terms of environmental impact. The Committee role includes among others: addressing the problems and misconceptions surrounding wipes usage; filling the knowledge to practice gap, by providing a scientific exchange platform; and more importantly, drive and make positive changes in the wipes specialized industry. Introducing the Global Wipes Committee

Why this committee?

Because wipes are becoming more and more an integral part of our life, with a wide spectrum of application whether industrial or personal.

The committee is starting with a distinguished team of international experts in the industry, out-of-the-box thinkers, to share their perspectives with regional/global exposure. It will make innovative and significant contributions to the wipes industry.

"I wish to have an engaging and productive committee works for the benefit of all TAPPI members. We aim to make this committee richer in itself, with a win-win situation for all".

Bechara Michael Dib, chair of the Global Wipes Committee.

Calling for members to join

"We would like to call all of you; machine suppliers, raw material manufacturers, scientists, teachers, students, to join this committee..."

Bechara - Michael Dib Global Wipes Committee Chair



HOLDING

×

JOIN THE WOG ALLIANCE

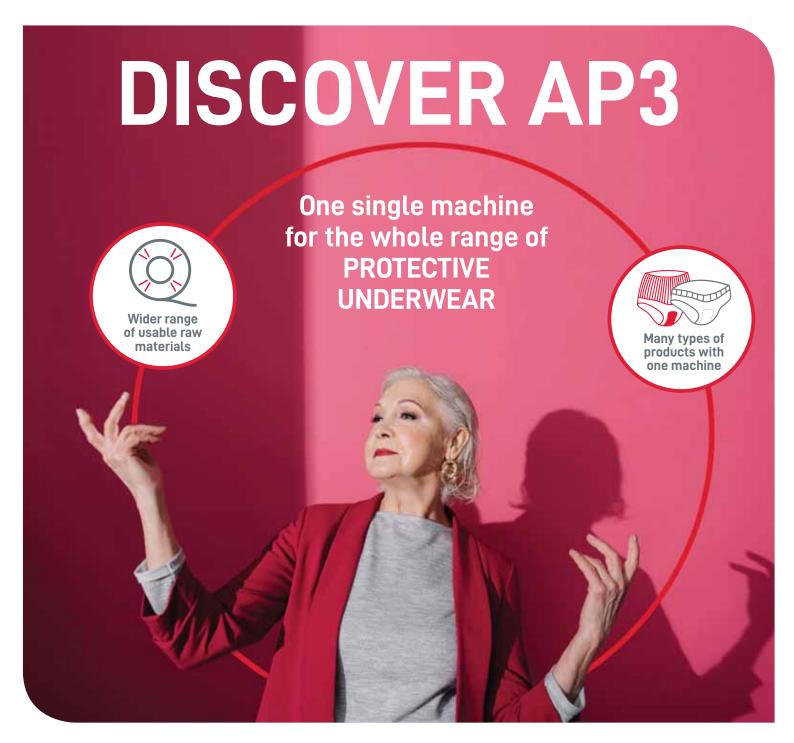
加入WOG联盟

2020 CHINA MARKETING 市場深度調中發展網界完裝在

MEAC 服務優勢 MEAC 服務優勢

0





AP3 is the latest GDM portfolio solution for premium Adult Protective Underwear products with a production speed of 300 ppm. It is designed to deliver from standard heavy inco to moderate inco protective underwear enabling a wide range of materials processing. AP3 distinguishing features:



Excellent for either heavy or moderate incontinence; ideal for both standard and premium products.



Lower Total Cost of Ownership (TC0) through the highest level of OEE and reduction of material waste.



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Possibility of using a wide range of raw materials for the production of different types of products.



Ease of use and intuitive processes thanks to the linear layout of the machine.



Turn-key solution with SB40 packaging machine.



Superior core quality: technology with possibility to use different core recipes from standard core to thinner core.

Contact us: info.it@gdm-spa.it ≡ ⊠



