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met

The magazine for the hygiene industry

The background of the cover is a photograph of a brick wall. Overlaid on the wall is a large, semi-transparent image of the Ukrainian national flag, featuring its characteristic blue and yellow horizontal stripes. The flag is positioned diagonally across the frame. In the upper left corner, there are three yellow stars of varying sizes, reminiscent of the European Union flag, set against a dark blue background.

UKRAINE CRISIS PUTS MENA ENERGY DIVERSIFICATION ON HOLD?

**MENA tissue
producers report**

**Opportunities
and challenges in
femcare products**

**Tissue and
nonwovens
technologies**



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TURKEY

Essel Selüloz and Yöntem Kağıt start up Futura lines

In March 2021 Essel Selüloz ve Kağıt A.Ş. and sister company Yöntem Kağıt Ltd, which have been the leading tissue producers in Turkey for over 20 years, signed an agreement with Futura and Plusline for the supply of two converting lines complete with packaging for their plants in Turkey.

In February 2022, the fruit of this agreement has become a reality with the start-up of the first of the two lines, at the Osmaniye plant. This high performance converting line features two fully-integrated packaging systems, each combining two Togethers and two Overpacks.

Together is the technology conceived by Futura and Plusline which converts logs into shelf-ready packs. It has changed the rules of the game in tissue converting by ensuring process continuity, increased speed and levels of production efficiency never achieved before.

The integration of Together within these lines also allows users to optimize the space occupied by the line and minimize manual intervention.

Overpack is Plusline's high-speed automatic bundler.



Essel Selüloz and Yöntem Kağıt start up Futura lines

NIGERIA

ANDRITZ to supply two baby diaper lines to Fouani

ANDRITZ has received an order from Fouani, Nigeria, to supply two baby diaper lines for its facilities in Lagos. The lines will produce a wide range of top-class diaper products with absorbent cores made of pulp and SAP (super absorbent polymer). Start-up is scheduled for 2022.

The two baby diaper lines feature the most advanced forming technology for the absorbent core and SAP dosing. Furthermore, the lines are equipped with a web tensioning control system and quality check devices to ensure a high level of production quality. In addition, ANDRITZ will provide services for installation and start-up of the machines.

Once the lines have been started up, Fouani will be a baby diaper manufacturer with a strong local footprint. The target is to serve the market in Nigeria with state-of-the-art products produced locally.

Fouani Nigeria Ltd was established in 2001 as a subsidiary of the Fouani Group of Companies. The company has grown to be a pioneer and the sole distributor of LG, Hisense, and Maxi products in Nigeria, Africa, thus winning several awards for its proactive market penetration. With this second order, Fouani confirms its trust in and reliable partnership with ANDRITZ.



ANDRITZ baby diaper line. Photo: ANDRITZ



Fouani Group with ANDRITZ Hygiene Converting staff at Index 20. Photo: ANDRITZ

FRANCE

Valmet to supply quality control system to Papeterie Le Bourray

Valmet will supply IQ Quality Control System to Papeterie Le Bourray in France. The new system will replace the aging old third-party system and will be installed on tissue machine TM 3 at the company's mill in Saint-Mars-La-Brière, North West France. The target is to optimize production and improve the end-product quality.

The order was included in Valmet's orders received of the fourth quarter 2021. The delivery will take place in November 2022.

This is the second Valmet IQ Quality Control system order to Papeterie Le Bourray's mill. The first one was for their tissue machine TM 4, which was started up in September 2021. Valmet has also supplied distributed control system to Papeterie Le Bourray in 2016.

Valmet and Papeterie Le Bourray have had a long and successful co-operation. According to the customer, they have been satisfied with their experience, and Valmet's innovations and professional service.

"Papeterie Le Bourray is our long-term customer with very specific needs. We are pleased to supply the quality control system to improve their quality. Our online measurements and controls will increase the stability of their production. With our combination of process know-how and strong service, we are confident that we will fulfill their expectations," says Eric Butreau, Sales Manager, Automation business line, Valmet.

Papeterie Le Bourray is a world-known manufacturer of a range of specialist cellulose wadding for specialist uses and techniques such as filtration, sanitary towels, and the medical and hygiene sectors.

The company's mill in Saint-Mars-La-Brière produces premium quality white and colored tissue paper. The mill has historical roots from the 1840s and started its tissue production in 1974. In 2019 the mill became independent, still focusing on tissue production and also investing to develop recycled fiber production.

ROMANIA

ANDRITZ tissue production line at MG TEC Industry in Romania delivers top quality

ANDRITZ has successfully completed all the performance test runs for the PrimeLineCOMPACT tissue production line delivered on turnkey basis to MG TEC Industry for its mill in Dej, Romania.

Dorin Mocan, CEO of MG TEC Industry, says: "Together with ANDRITZ, we have started up our new tissue production line successfully and are proud of the perfect end-product quality. Based on this success, we have placed a repeat order with the same scope of supply and are looking forward to its installation."

The energy-efficient PrimeLineCOMPACT tissue machine, with a design speed of 1,900 m/min and a paper width of 2.85 m, produces high-quality tissue grades. It includes an ANDRITZ PrimeFlow headbox with on-the-run jet angle adjustment, a suction pressure roll with drive side exhaust to ensure easy felt and roll change, a 15-ft. PrimeDry Steel Yankee for energy-efficient and safe operation, a PrimeDry Hood G gas-heated Yankee hood, a PrimeDustEXT dust extraction system, and a PrimeMistEXT mist extraction system.

MG TEC Industry is a newly formed company focusing on innovation and sustainable tissue production.



Top tissue quality with ANDRITZ technology at MG TEC Industry, Romania. Photo: ANDRITZ

ITALY

Körber Business Area Tissue presents an interfolded napkin that's perfect for wrapping tacos

Thanks to MTC ITF omni taquera it's possible to create facial products, towels, folded toilet paper, and taco napkins with a dispenser using one single machine

Körber Business Area Tissue's latest innovation enables to create the complete line of interfolded products (facial, towels, folded toilet paper, napkins), including napkins for wrapping tacos, with a single machine.

Stefano Anelli, Körber Business Area Tissue Fold Sales Manager, comments: "The South American market needed to have a napkin specifically designed for wrapping tacos. From this need and from the collaboration between the sales office, research & development, and specialized technicians, the MTC ITF omni taquera was born, an extremely versatile solution that can be installed on the MTC IFT omni lines that allows to produce all the interfolded products, including the napkins for tacos, with a single bending head."

Ideal for companies that work with diversified clientele, the taquera option can be integrated on all MTC ITF omni lines and offers a competitive advantage for all those companies looking for a flexible and versatile solution that's capable of responding to changing market needs.

MTC ITF omni taquera combined with automatic packaging of napkins in a portable dispenser with serial extraction is a very contemporary solution because it allows to preserve the hygiene and safety of the finished product while avoiding contamination of the wipes.

Anelli concludes: "Thanks to MTC ITF omni taquera Körber Business Area Tissue confirms its role as a company that is attentive to offering its customers cutting-edge and innovative solutions. The know-how acquired over the years in the fold sector and the continuous desire to create highly performing products has allowed the company to develop a competitive product with high growth margins. The solution created for the South American market, in fact, can be used in different sectors with similar product needs. "



BANGLADESH

A.Celli starts up a complete turnkey Tissue plant at Partex Star Group

A.Celli Paper successfully started up in December 2021 the turnkey Tissue plant supplied to Partex Star Group.

The line, installed for the production of bulky and soft Tissue with high levels of absorbency, includes a low-consumption complete stock preparation from 100% pure cellulose pulp, the "Control and Automation System", the ancillary services and the field equipment.

The scope also includes a new iDEAL® Tissue machine with a width of 2800mm at the pope reel and a maximum operating speed of 1800 m/min, a 15-foot forged steel Yankee Dryer, an E-WIND® T100 three-ply Tissue slitter rewinder and, finally, a reel handling system.

Mr. Shamsul Arefin Chowdhury, collaborator of A.Celli Group, says, "It was extremely satisfying to produce the first Jumbo Roll with A.Celli Tissue machine. We at Partex Tissue Ltd. would like to thank A.Celli for the state-of-the-art technology and services they provided us with, which allowed for a wonderful start up without any sheet breaking. All of this was possible despite the COVID 19 pandemic situation and the consequent limitations."

PARTEX STAR GROUP

Partex-Star Group is one of the largest Bangladeshi private sector enterprises. The group, the then Partex Group, started its journey in 1962 thanks to Mr. M.A. Hashem and currently owns and operates more than twenty-five manufacturing, service and trading companies. The goal of the group is to offer the best value to its customers through its products and services for the consumer durable and FMCG markets.



A.Celli Tissue plant at Partex Star Group, Bangladesh

CHINA

ANDRITZ successfully starts up the second of two tissue machines delivered to Guangxi Sun Paper

On December 25, 2021, ANDRITZ successfully started up the second of two PrimeLine™ W 2000 tissue machines delivered to Guangxi Sun Paper, China, for its mill in Beihai City, Guangxi Province.

The tissue machine (TM6) has a design speed of 2,000 m/min, a working width of 5.65 m and a capacity of 60,000 t/a, and it is equipped with energy-saving components (steel Yankee with head insulation, heat recovery system, Yankee Ecostream system for re-evaporation). Forming fabrics and press felts by ANDRITZ Fabrics and Rolls were installed for optimum end-product quality.

Like the TM5 order, the scope of supply also included FibreSolve FSV pulpers, the paper machine approach flow systems, broke handling and fiber recovery, and automation systems.

Guangxi Sun Paper is part of the Sun Paper Group. It was founded in 2019 with the aim of establishing an integrated pulp and paper mill in Beihai City. The new greenfield mill will presumably have a total pulp and paper capacity of 3.5 million t/year and will be built in two phases over approximately four years. With this start-up, Sun Paper now has four ANDRITZ PrimeLine tissue machines successfully in operation.



Successful start-up of the PrimeLine™ tissue machine TM6 at Guangxi Sun Paper, China. Photo: ANDRITZ

UKRAINE

ANDRITZ to supply a high-capacity spunlace line to Biosphere

ANDRITZ has received an order from the leading Ukrainian manufacturer of household and hygiene products, Biosphere Corporation, to deliver its first complete neXline spunlace line. The ANDRITZ spunlace line will enable Biosphere to produce fabrics from 30 to 70 gsm, with an hourly output of up to 3,000 kg/hr after the second commissioning phase. Start-up is scheduled in two stages – the first one in the first quarter of 2022 and the second in early 2023, reaching full production capacity.

The high-capacity spunlace line will double the company's current production capacity and is designed to process various types of fibers, such as polyester/viscose blends and natural fibers. It is dedicated to the production of household, medical and hygiene fabrics, such as cosmetic, disinfecting and baby wipes.

Andriy Zdesenko, founder and CEO of Biosphere Corporation, says: "Our goal is to carry on creating innovative and premium-quality products. When ANDRITZ came up with a tailor-made offer combining its cutting-edge spunlace technology with full flexibility for our future installation, we knew they were the ideal partner to support us in our business development."

In 2019, ANDRITZ Diatec delivered a baby diaper converting line to Biosphere. With this additional order, ANDRITZ is demonstrating its strong global position as a supplier of state-of-the-art and tailor-made sustainable nonwoven solutions.

Founded in 1997, Biosphere Corporation has become the market leader in the production and distribution of household and hygiene products in the Ukraine and the CIS and a key converter player in Eastern Europe and Central Asia. The company is expanding rapidly on the international market, including Africa.



ANDRITZ neXline spunlace eXcelle line. Photo: ANDRITZ

UKRAINE CRISIS PUTS MENA ENERGY DIVERSIFICATION ON HOLD?

*Cyril Widdershoven, Owner, VEROCY
Global Head Strategy & Risk,
Berry Commodities Fund*



The ongoing Russian invasion of the Ukraine is taking a heavy toll on hydrocarbon demand and supply. Without any doubt the continuation of the crisis, whether Ukraine or Russia prevails, will be a watershed fact that energy and commodity markets will have to be reassessing the coming weeks.

Crisis ahead

Clearly, the Russian invasion will be constraining European energy markets for years to come, pushing not only for a diversification of energy supply routes but also take a heavy toll on possible investment strategies in hydrocarbons and renewable energy. The economic outfall for the global economy seems at present to be minimal; but looking ahead it could be a major burden to most. The potential barring of Russia's financial and economic sectors from international trade, as it is pushed for by an increasing list of countries, will take off not only international trade by Russian companies, but also will remove part of the energy and mineral commodities trade and supply.

European countries are mainly looking at their own risk with regards to natural gas and crude oil supplies, as is even the USA, but on a global scale the impact could be even larger. Possible

long-term sanctions could block around 4+ million bpd of crude oil from Russia hitting markets, and more than 170+ bcm natural gas. These losses will have to be countered, if even possible by other producers, mainly to supply hard-needed energy supplies but also petroleum products and fertilizers. At the same time, the pivotal role of Ukraine and Russia in agricultural products, such as corn, wheat, or sunflower oil, but also in minerals and steel, for the global community is still undervalued.

Eye on the MENA

When looking at the position of the MENA region, the world's largest oil and gas producing area in the world, first ideas would be that this would be a possible additional push for their economies. Higher oil and gas prices will be bringing in additional billions of dollars to be spent on economic diversification and to strengthen their future economies. This one-sided

approach, however, is going to be lopsided. The overwhelming majority of citizens living in the MENA region are not living in strong energy exporting countries, but mainly in energy importing fragile economies at present. Even Egypt, which has witnessed a major come-back of its own LNG export volumes to international markets, is still a net-petroleum importing economy. Additional high LNG revenues will be a blessing, but the costs of higher prices of imports, especially food, will not be mitigating the latter.

“Import dependency of basic foodstuff, commodities, metals or even cement, are a major worry for the future stability.”

The current crisis, which was already in the making before the Russian invasion of Ukraine, was looming at the horizon. Import dependency of basic foodstuff, commodities, metals or even cement, are a major worry for the future stability. Major other countries, such as Jordan, Lebanon, Tunisia, Algeria and even Saudi Arabia, are facing higher import costs for basic and industrial needs. The gains being made at present by higher hydrocarbon revenues are a boon, but inflationary pressures and potential logistical constraints are to become a headache very soon. Higher government revenues, such as are predicted in Saudi Arabia, UAE, Kuwait and even Egypt or Iraq, will not be able to put enough power in the market to substitute for the loss of Ukrainian-Russian agricultural products (40% heading to MENA), or to counter higher import costs of all materials needed for the ongoing economic diversification projects. OPEC's financial powers are strong, Arab producers are making a hefty profit, but import bills will be sky-high.

The threats to food security will be a major destabilizing factor to address, especially that the Ukraine-Russia exports will be out of the market and no other supplies are available.

Internal stability is key for progress and prosperity, and revenues can be a major pillar. However, higher energy prices can be subsidized (as is usually the case in MENA), but people can't eat money. A general rule is money can buy stability, people can withstand higher living costs, but without food commodities they will go to the streets, for instance, the so-called Arab Spring (or winter) started only 3 months after Russia sanctioned agricultural exports to Egypt and others.

When purely looking at oil and gas production and exports in and from the MENA region, SWIFT and other sanctions on Russia will have a potential detrimental on key Arab OPEC producers also. The disruption of access to the international system, combined with specific sanctions on Russian entities, such as Gazprom, Lukoil, Rosneft and others, will be disrupting major upstream and downstream operations in MENA. Russian JV or operations in Iraq, UAE, Egypt, and Algeria, will be hit hard. Some could even be totally closed, as Western IOCs in these JVs will not be able to cooperate at present. Potential closure or disruptions will not only hit revenues for governments but also have a price increase effect on the global markets. International Arab investments in Russia or with Russian non-oil parties, such as Russia's sovereign wealth fund RIDF and others, will be hampered or maybe even totally blocked.

“SWIFT and other sanctions on Russia will have a potential detrimental on key Arab OPEC producers.”

The main critical part for MENA energy will be not to be directly or indirectly sanctioned based on SWIFT requirements. The Iran and Iraq sanction regimes have been stringent, but still it had ample options to circumvent. Iran's crude oil and gas is still reaching international markets, even via several Arab financial centers. The upcoming sanctions onslaught on Russia however will be stricter. No international bank will be allowed to use SWIFT for financial transactions with Russia. At the same time, possible sanction regimes will be targeting financial and real estate assets of key Russian oligarchs, politicians, and Putin supporters. The focus will not only be on European-USA markets, but will be globally. No access to capital will have a possible major impact on Russian projects and investments in Egypt, Saudi Arabia, Dubai, Qatar, and other countries too. Without having access to SWIFT, Russian tourists will also be forced to stay home.

Putin's move, by some seen as major financial gain for “long-bullish energy markets” could be a Sword of Damocles for most in MENA. The costs of importing goods and (semi-) products for the major Arab economies will increase substantially. Logistics, which are already disrupted due to COVID and China, will be even more worrying. Higher energy revenues are not available for all Arab countries, the instability in Lebanon, Libya, Syria, and other places will increase too. The future of energy which looked very bright, especially in light of energy-transition and renewable investments plans in MENA is now being put on hold.

The need to change is clear, the current Ukraine war shows that energy diversification is needed to cope with threats in the future, but the options available at present are constraint. Most Arab governments will be keeping officially to their current project strategies and statements, but reality is pushing back implementation for sure.

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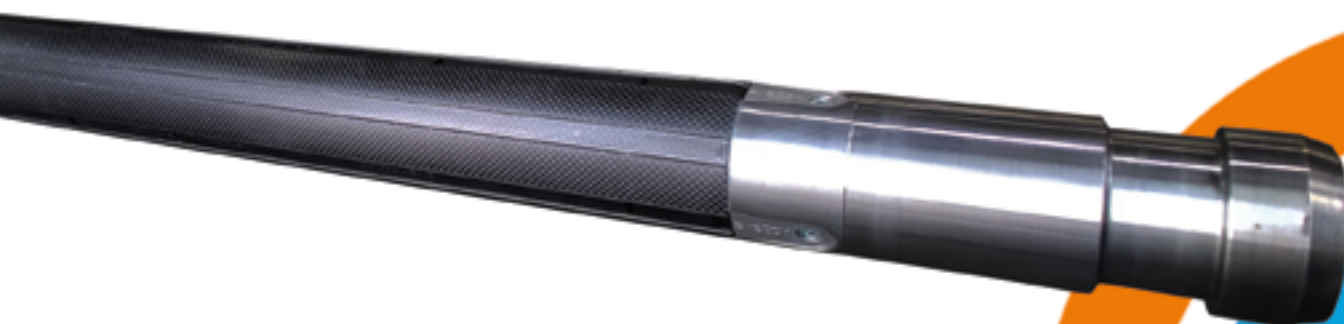
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*An interview with FHH's CEO
JAMES MICHAEL LAFFERTY*

“The global situation has affected businesses around the world, but where others have scaled back or halted investments, FHH was prepared and determined to continue moving forward and face obstacles head-on, while keeping in mind the future of the world after the Coronavirus pandemic.” James Michael Lafferty, Fine Hygienic Holding CEO.

Under the leadership of James Michael Lafferty, and through the toughest times, Fine Hygienic Holding (FHH) is consolidating more than ever its leadership as a wellness group and manufacturer of hygienic paper products, with the installation of the cutting-edge Gambini AirMill line at its Abu Dhabi production facility, a move that has upgraded its paper product capabilities and taken its investments in the United Arab Emirates above US\$ 136 million.

Following is an interview with James Michael Lafferty, related to the new line made by Gambini, FHH's masks production history, today's industry challenges, in addition to his opinion on consumer behaviour post COVID era as well as his opinion on the wellness market.

GAMBINI'S STATE-OF-THE-ART AIRMILL TECHNOLOGY

What was the motivation to acquire Gambini's AirMill?

It's a combination of things. One, is to be able to offer superior products to the consumer. In rolled products, the AirMill technology in papermaking can give certain competitive advantages, especially in towel with strength and absorbency; so obviously putting in an AirMill machine it's a whole different level of investment. We were impressed with what Gambini had done, and the ability to bring AirMill type technology into the converting side. We wanted to improve the product performance and improve our options with the consumers by offering a superior product, and always be a premium branded company. It was a lean forward that we had to execute. That's what we did, and we are very happy with the result.

We just launched it in the Middle East. We ordered the machine in late 2018 early 2019, way before COVID-19. But by the time it was delivered, we were right in the middle of COVID-19. The entire qualification and startup were delayed for about a year because of travel restrictions and COVID-19 concerns. We started production in July 2021.

Is it your first partnership with Gambini?

This is our first, but we obviously knew them well, we had a strong relationship, and had been in discussions in the past. So, it was not a big step to go all the way to ordering of the line. We knew their reputation; we did our homework and what lines they had available at that time. They had one test line in their facility and a couple in Europe. We flew to locations and observed the machines and production, talked to the teams, did the due diligence to say we can be on the front end of this technology; So, let's go ahead and do this!

Besides reducing manufacturing cost, what added value the new line brings to FHH products?

In short, improve product performance: increasing caliber, absorbency, and wet strength, in addition to bringing enhanced softness for the toilet paper, high strength for the kitchen towels, increased role diameter for toilet paper, as well as reducing the amount of pulp that's being used in the product. The AirMill technology brings multiple benefits.

We are excited to see how the consumer will react to the product. Our start point is always serving the consumer, the CEO of our company is not me, the CEO of the company is the consumer, and this investment was done to generate a better consumer experience with our products. I think this is where our industry needs to go; to spend more time on the consumer and less time just being internally oriented on costs and efficiencies. For the 30 years I've been in this business, I always believed that part of the problem of the commoditization of tissue is that we don't spend enough time as an industry focusing on our consumer, we spend our time internally. So, the whole foundation of this is to look at the outside world and ask: "what do consumers want"? If you look at the quality of rolled products available in a market, i.e. the UAE, the quality and performance compared to parts of Europe and North America is woefully inadequate, to put it mildly. So why the consumers in this part of the world or in these countries should not



get the same kind of performance that they can get when they are in a North American store or a British store, or a German store... They should be able to get a comparable performance, and this is not happening. We want to be the company that brings that kind of performance to the marketplace. And we think that our consumers in this region do deserve the best and we should provide them with the best.

Any installation plans for AirMill in other countries?

Not yet, first we need to fill the capacity we have, but we are certainly looking at options; we are always exploring, expanding the idea, and obviously with that, expanding the footprint of the technology into different markets.

We have a quite aggressive capital expansion plan, and we execute on that every year, but for confidentiality reasons I cannot disclose the specific details.

“The CEO of our company is the consumer.”



FINE GUARD: A LEAP AHEAD

When COVID-19 pandemic started, FHH was a leader in mask production, can you tell us more about it.

Well, here's the story. We sterilize our products today with SteriPro technology. We sterilize our tissues, because tissues are made in a wet environment, the germ load on a tissue is very high, and tissues touch the most sensitive parts of our body; eyes, nose, and mouth, exactly the three places from where bacteria and viruses enter the body. As part of our continuous improvement process, we were experimenting since 2018 with a Swiss technology called Livinguard, which, if put on the paper, it does not only kill the germs, but keeps killing them continuously. Therefore, tissue is not only sterile only inside the box, but it stays sterile even when taken out.

When COVID-19 started, I was advised by a friend virologist to wear a mask because the virus loves the human respiratory tract. This was around mid-January 2020. The next day, I called the team and said we are going to launch a mask using the Livinguard technology on a fabric, because we knew it worked better on fabrics than it did on paper.

And we were on the market beginning of February.

In February 2020, we were the first company, in the world, to have a mask mandate. Everybody thought I am crazy. At that time, the scientists were saying no need for masks, till the data showed differently, this is how we became the first ones in the world with an antiviral mask. We are a science driven company, but we combine science with good empirical thinking.

How effective are Fine Guard face masks in comparison to N95?

It is not true that the only effective masks are the filtration masks N95. Most viruses travel as droplets of water, they don't travel individually; and these big droplets can be stopped with a cloth mask. On top of that having a mask that has antiviral properties, protects better than any filter mask, because the outside of a filter mask is covered with germs that can infect the person wearing it while taking it off and on. Fine Guard mask is always germ free because it neutralizes bacteria and viruses on a molecular level as these get in contact with the mask itself. In addition to better protection, Fine Guard mask ensures better breathability.

Did you face skepticism from the consumer side because the mask is from textile?

Sure, there are people who think it won't work because they don't understand the science and technology behind it. It is quite simple; every membrane of a virus and bacteria has one thing in common: the outside of that membrane has a negative charge. The textile of the mask is positively charged, it can grab the virus or the bacteria like a magnet and hold on to it and kills it mechanically before it passes through. There's no toxic chemicals or poisoning involved. Therefore, there's no need for filter. We have data from the best labs in the world, it's a 99.9% kill rate. It's a higher kill rate than a 95% filtration of an N95.

Fine Guard is also a sustainable, environmentally friendly solution. Nonwoven masks aren't biodegradable and constitute serious threat to the environment.

Finally, Fine Guard mask is cost efficient, it can live up to 50 washes or two years, in comparison to the disposable mask which needs to be changed several times a day.

So yes, the initial price is more but if you look at cost per day, we have the most cost efficient, highly effective mask in the world today.

What were the export markets?

All over the world, our exports targeted more than 50 countries in the US, Europe, and Asia. We had factories in the UAE and Jordan, and a partial factory in Sri Lanka. We mainly exported from Jordan because there was a ban on mask exports in the UAE.

CHALLENGES AHEAD

What are your thoughts on consumer behavior post COVID-19?

Nobody really knows, but it's certainly not going to be the same. There will be a new normal, but it will never go back to the way it was. The big focus is on wellness and everything that has to do with wellness. We think a company like ours is so well positioned as a wellness company, and we make sterilized tissues, we sell high quality personal protective equipment (PPE), we also sell state-of-the-art long term germ disinfectants. And now we even have nutritional supplements "Motiva" intended to improve the immune function, reduce the body inflammation for optimal health. I think there will be a big focus for at least the next couple of generations, for the next 50 to 75 years, on wellness. And the companies that are positioning their products to improve human health and human wellness are going to be the ones that win. And that is exactly what we intend to be.



For the time being, what are the main challenges for the industry in the MENA region?

I think the big issues are around the capacity, there is overcapacity which leads to irrational pricing behavior thus the industry loses its profitability. If we look at the industry trends on machine bills, it's way past the point of being sustainable, there will be rough years and very rough financials for the industry in general. I think there has to be more strategic outlook, more long-term lookout, into how markets develop, and how things evolve. I don't see that kind of reaction; I think there are certain government actions that are damaging our industry in terms of import duties and energy policy. There is not enough understanding of certain economic policies and their impact on various industries such as paper. But these are issues we must work through proactively, and lead with.

PASSION FOR PEOPLE

It is clear that you are committed to the MENA region, can you tell us more?

It's a very emotional subject; when I landed in the Middle East 31 years ago, I couldn't explain it, but I just felt like I am at home from day one. I've always had a certain attraction to the Buddhist concept of reincarnation, maybe I reincarnated? It is a region that I always had affection for, and I worked in it multiple times.

This job of mine is not just a job, it is a passion, I wouldn't take it if it was anything else, which is: make a great company that goes out and shows the world what a company from this region can do and make it as a shining example; we have a chance to do that with our masks and all over the world. I take pride when I see pictures of people in the US wearing Fine masks, because they aren't buying American masks, but masks made in Jordan, a great country with great people

and a great culture and learning that they can get a great product from anywhere, it's not just America that makes good products. That is part of the company's mission, we must step up to the challenge, we are competing with very good multinationals, it is not just automatic, our own people must embrace that vision; it cannot just be me, but all the 3000 plus employees saying: we want to make our region proud. We want to do this because, let's face it, on a global basis most of the news in our region is negative, so we want to change that and bring the positive news. And if someday, we're ringing the bell on the London Stock Exchange on the Fine listing, and that's what's on Yahoo Finance today, this is positive news; a company founded in this region is now listed on one of the most prestigious stock exchanges in the world.

These are the kind of stories we want to bring, not only the beauty and the culture of the region, but also the greatness of the region.

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TISSUE PRODUCERS IN THE MIDDLE EAST AND NORTH AFRICA

Country	Company	Tissue Machine	Operating Speed (m/min)	Width (m)	Production Capacity (tons/year)	Supplier	Startup Year
Lebanon	Unipak Tissue Mill	PM1	1,500	2.7	22,000	Beloit	1995
	Sanitary Paper Co - Mimosa	PM4	700	2.3	7,000	Toscotec	1992
		PM5	850	2.1	8,000	Toscotec	1995
Jordan	Al Keena Hygienic Paper Mill	PM2	1,650	3.67	30,000	Voith	1995
	Al Snobar Hygienic Paper Mill	PM4	2,000	5.4	54,000	Valmet	2007
Syria	Saffoury Paper Mill Industries	PM1	800	2.6	-	-	2002
	Oriental Paper Manufacturing	PM1	600	2.7	9,000	Recard	1995
	Lanatex	PM2	1,100	2.72	17,000	Over Meccanica	2000
	Dinatex Paper Manufacturing	PM3	1,800	2.72	28,000	Over Meccanica	2007
	Mediterranean Paper Mills	PM2	900	2.25	-	Toscotec	2011
UAE	Abu Dhabi National Paper Mill	PM1	1,900	2.77	28,000	Over Meccanica	2002
		PM2	2,000	3.62	35,000	Over Meccanica	2007
		PM3	2,000	2.8	27,000	Valmet	2015
	Crown Paper Mill Ltd FZC	PM1	1,100	1.86	11,000	Beloit	2000
		PM2	1,700	2.75	24,000	PMT	2007
		PM3	2,000	5.6	60,000	Valmet	2019
	Queenex Hygiene Paper Mfg.	PM1	1,800	2.85	28,000	Over Meccanica	2012
	Star Paper Mill	PM1	1,700	2.85	30,000	Recard	2019
	Al Nakheel Paper Mill	PM5	2,000	5.4	54,000	Valmet	2018
Kuwait	Gulf Paper Manufacturing Co.	PM2	1200	2.25	12,500	Carcano	1982
Bahrain	Olayan Kimberly Clark	PM1	1,250	2.6	14,000	Y.K.	1990
		PM2	2,000	2.8	28,000	Voith	2011

Country	Company	Tissue Machine	Operating Speed (m/min)	Width (m)	Production Capacity (tons/year)	Supplier	Startup Year
Iran	Pars Hayat Saglik Urunleri S.H	PM1	2,200	5.6	70,000	Valmet	2013
	Zarrin Barge Persia Paper Industry	PM1	2,000	5.6	60,000	Valmet	2014
		PM2	2,000	5.6	60,000	Valmet	2018
	Harir Khuzestan Co.	PM1	1,000	2.7	15,000	Voith	1995
	Latif Paper Co.	PM2	1,400	2.7	18,000	Andritz	2010
	Aryan Cellulose Sanat Co.	PM1	500	2.8	10,000	-	2014
	Golpoune Pars Industrial Co.	PM1	1,400	2.75	18,000	Over Meccanica	2014
Tunisia	Tunisie Ouate	PM2	1,100	2.7	16,500	PMT	2002
		PM3	1,600	2.76	26,000	GapCon	2014
	Azur Papier	PM1	1,500	2.75	22,000	Recard	2013
		PM2	1,800	2.75	28,000	Recard	2018
Morocco	Sipat	PM1	600	1.8	5,000	Toscotec	1978
		PM2	1,300	2.75	16,000	Toscotec	1995
	Jeesr Industries	PM1	2,000	2.8	30,000	Valmet	2013
Algeria	Tonic Emballage Industrie	PM1	1,500	2.7	20,000	Valmet	2006
	Faderco SPA	PM1	2,000	2.8	30,000	Valmet	2007
		PM2	2,000	2.85	30,000	Valmet	2020
	Africaine Paper Mills	PM1	2,000	2.85	30,000	Andritz	2019
Egypt	Al-Sindian Paper Mill	PM1	1,600	2.25	17,000	Valmet	1991
		PM3	2,000	5.4	54,000	Valmet	2005
	Al Zeina Tissue Mill	PM1	2,000	2.75	30,000	PMT	2008
	Alex Converta Company	PM1	1,500	2.85	24,000	Recard	2018
	Carmen Tissues	PM1	800	1.7	6,000	ACelli	1995
	Interstate Paper Industries	PM1	1,800	2.86	25,500	ACelli	2008
		PM2	1,800	2.86	25,500	ACelli	2010
		PM3	1,000	2.7	12,500	Recard	2012
	Hayat Kimya Group	PM6	2,200	5.6	70,000	Valmet	2017
	Mediterranean Tissue Mill	PM1	1,500	1.8	15,000	Beloit	2011
		PM2	1,400	2.75	25,000	Over Meccanica	2014
	Flora-Pyramids Paper Mills	PM1	1,000	2.5	10,000	Over Meccanica	1988
		PM2	1,400	2.6	19,000	Voith	1995
		PM4	1,200	2.5	12,500	Over Meccanica	2007

Country	Company	Tissue Machine	Operating Speed (m/min)	Width (m)	Production Capacity (tons/year)	Supplier	Startup Year
Turkey	Aktül Kağıt Üretim Pazarlama A.Ş.	PM1	2,200	5.6	60,000	Valmet	2011
		PM2	2,200	5.6	60,000	Valmet	2016
		PM3	2,200	5.6	70,000	Valmet	2022
	Hayat Kimya San ve Tic. A.Ş.	PM1	2,200	5.55	70,000	PMT & Valmet	2006
		PM2	2,200	5.6	70,000	Valmet	2010
		PM5	2,200	5.6	70,000	Valmet	2015
		PM8	2,200	5.6	70,000	Valmet	2021
	Lila Kağıt San. ve Ti. A.Ş.	PM1	2,200	5.64	70,000	Valmet	2007
		PM2	2,200	5.64	70,000	Valmet	2012
		PM3	2,200	5.64	70,000	Valmet	2020
		PM4	2,200	5.64	70,000	Valmet	2021
	İpek Kağıt Tissue / Eczacıbaşı	PM1	900	2.2	15,000	ER-WE-PA	1970
		PM2	1,600	2.7	35,000	Beloit	1991
		PM3	2,000	5.4	60,000	Beloit	2000
		PM4	2,200	5.6	70,000	Valmet	2015
		PM5	2,200	5.6	70,000	Valmet	2022
	Levent Kağıt San. ve Tic. A.Ş.	PM2	1,400	4.40	24,000	Voith	2002
	Parteks Kağıt	PM2	900	2.75	6,000	Beloit	1996
		PM3	1,600	2.85	26,000	Toscotec	2014
	Europap Tezol Kağıt San ve Tic	PM1	1,600	2.85	25,000	Recard	2016
		PM2	1,800	2.85	30,000	Recard	2009
		PM3	2,000	2.85	30,000	Valmet	2015
		PM4	2,100	2.92	40,000	Toscotec	2022
	Viking Kağıt ve Seluloz A.Ş.	PM1	550	4.5	15,000	ER-WE-PA	1971
		PM2	1,500	2.76	27,000	Valmet	1999
	Essel Cellulose	PM1	1,600	2.8	25,000	ACelli	2006
		PM2	1,800	3.1	32,000	Recard	2015
		PM3	2,000	5.7	90,000	Toscotec	2022
	Eka Kağıt	PM2	1,500	2.85	25,000	Over/ABK	2014
		PM3	2,000	2.85	30,000	Over	2016
KSA	Gulf Paper Industries Factory	PM1	1,500	2.8	28,000	Over Meccanica	2007
	Saudi Paper Manufacturing	PM1	1,700	2.75	18,000	Recard	1992
		PM2	2,100	2.85	30,000	Toscotec	2022
		PM3	1,600	3.6	22,000	Recard	2001
		PM4	2,000	5.5	60,000	Valmet	2008
	Al Faris Paper Mill	PM1	2,000	2.85	28,000	Papcel	2019
	MEPCO	PM1	2,200	5.6	60,000	Toscotec	2023



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FEMCARE PRODUCTS:

Growing competition, huge innovation, plenty of room for growth

The femcare products market is rapidly expanding according to a high-competition, disruptive-innovation kind of model. Once dominated by a handful of players, the feminine hygiene industry is getting crowded. Several factors are driving growth, such as the booming omnichannel approach, the upsurge of cause marketing and the steady rise of eco-friendly feminine products.¹

Let's have a look.

The femcare market goes omnichannel

COVID-19 has been a watershed moment for retailers of femcare products. As soon as stay-at-home measures took place, the spike in demand short circuited the supply, generating scarcity for a wide variety of goods. Not finding their favorite products on the shelves, many consumers were exposed to competitive solutions, often switching brand and store as a result.

Most importantly, a greater concern for gatherings and social contact led consumers all over the world to change the way they shop, pushing them to look for alternatives that integrate offline and online channels into a single unified customer experience. This model of distribution, sales and engaging with customers is called omnichannel.

Accelerated by the pandemic, the bricks-and-clicks retail strategy is quickly becoming a standard in the

feminine hygiene products market. Established and newer brands are opening new touchpoints every day, interacting with consumers on multiple platforms, be they e-commerce, social media or in person through clicks-and-mortar shops.

Most new products take off online via direct-to-consumer advertising and only then land in stores and supermarket aisles. It has become apparent, in fact, that despite the flashy boom of e-commerce, a solid amount of buyers

**If you want to expand your business into femcare products,
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still shop offline. For this very reason, startups and new venues in the space are looking for an entry in the much-desired supermarket shelf.

This phenomenon is also linked with the rise of Private Labels in the Disposable Hygiene industry. Indeed, Private Labels in the feminine hygiene products market have now morphed into social media-savvy direct-to-consumer brands, focused on storytelling, positioning and continuous technological innovation. Thanks to their seamless connection with the customer, Private Labels can now exploit a wealth of data on how people find them and what they buy.

In light of this, the landscape of femcare products is getting more and more complex year over year. While traditional companies have vast financial resources to invest into omnichannel, Direct-to-Consumer brands have an edge in terms of customer engagement and tend to be better positioned to adapt to a rapid market shift.

Cause marketing and femcare products: a relationship that pays off

A growing body of literature shows that corporate social responsibility (CSR) is a top priority for consumers². This is also true for femcare brands. In fact, it is no exaggeration to say that cause marketing is gradually becoming a must for femcare products companies.

Once a guerilla marketing tactic, cause marketing is now employed by more and more companies - especially direct-to-consumer brands. Interestingly, the main topic is no longer limited to eliminating period stigmas. DTC companies have expanded their cause marketing initiatives to include themes such as body positivity, access to menstrual products and even period education.

These endeavors are carried out through various platforms, both offline and online. From girls' clubs and parenting groups to schools, local communities and healthcare facilities, there is greater and greater will to fight menstruation shame and promote awareness. Given the rising interest in the matter, companies are seizing the opportunity, taking action with bold and witty measures in order to steer public discourse. Campaigns now go as far as incorporating actors, edutainment content, comedy sketches, Q&A with experts on social media and even donations of period panties and menstrual care products.

Eco-friendly feminine products are no longer a niche

In the femcare market of 2021, positioning is key. And since most manufacturers of menstrual care products tackle the mass market, direct-to-consumer brands are now addressing green-conscious customers in the natural and organic space in an effort to stand off from the competition and gain media coverage. Sustainability has in fact become a major driver of sales. Eco-friendly feminine products are no longer a niche.

Other than an ever-growing demand for corporate sustainability³, this is also due to a brands' necessity to diversify the offer in North America and Europe, where the penetration of disposable hygiene is sky-high and there's little to no room for acquiring new customers if not at the expense of other companies.

Sustainability meets innovation

A very promising area is that of organic pads and natural feminine products. As of today, more than 90% of menstrual care products are disposable. That accounts for 75,000 to 125,000 tons of solid waste in Germany, Austria and Switzerland¹.

Considering this, a number of women are looking at sustainable and performance alternatives that integrate naturally sourced bio-based material such as cotton and retailers are taking notice. Indeed, organic pads and bio-based menstrual care products occupy a larger and larger share of store shelves. This happens because most consumers perceive cotton as safe, soft and natural - plus, cotton enhances the image of an eco-conscious brand.

But companies thinking they can simply buy their way into this eco-friendly niche with a cover made of cotton will be displeased. Customers, in fact, are thoroughly looking at ingredients and product labels; as a result, brands are now listing in the label where each part is sourced. Transparency in labeling is now key for consumers, who demand natural and organic raw materials. But innovation in accountability does not come solely from within the industry: legislation mandating disclosure of ingredients have already been introduced in a few US states.

¹ Tara Olivo, (2020, December 11). Feminine Hygiene: Room for More. Nonwovens Industry. https://www.nonwovens-industry.com/issues/2020-11-01/view_features/feminine-hygiene-room-for-more/

² (2019, October 2). Consumers Expect the Brands they Support to be Socially Responsible. Business Wire.

³ According to McKinsey, companies with high ESG ratings consistently outperform the market in both the medium and long term.



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CHINESE BABY DIAPER BRANDS

CHINESE TRADITIONAL CULTURE PLUS SOCIAL MEDIA, AIMING AT YOUNG PARENTS

Luna Xing, China National Household Paper Industry Association

This article systematically summarizes the market positioning, product changes and marketing strategies of Chinese baby diaper brands in 2021 through a survey on eleven top manufacturers of baby diapers/diaper pads in China. It presents how Chinese baby diaper brands aimed at young consumer group from different aspects and found a development road of differentiation during competition in 2021 based on common and special problems outlined by these manufacturers.

The eleven manufacturers of baby diapers/diaper pads are: Fujian Hengan Group Co., Ltd., Guangdong Winsun Personal Care Products Co., Ltd., Hangzhou Qianzhiya Sanitary Products Co., Ltd., Guizhou Kabu International Biotechnology Co., Ltd., Hunan Suitsky Living Goods Co., Ltd., DaddyBaby Co., Ltd., Chiaus (Fujian) Industrial Development Co., Ltd., Dongguan Changxing Paper Co., Ltd., Quanzhou Tianjiao Lady & Baby's Hygiene Supply Co., Ltd., Fujian New Yifa Group and Mega Soft (China) Co., Ltd.

Changes in demographic structure, rise of new generation of consumer group

The demographic structure of China is changing at this stage. The reduction of child-bearing willingness of post-90s and the context of the COVID-19 pandemic kept China's birth rate low. The introduction of national three-child policy and relevant fertility promotion policies may slow down this trend to some extent. Therefore, the baby diaper market is faced with the reduction of actual users, the intensification of brand competition, market "involution", etc. However, there are also opportunities. The threshold of baby diaper industry will be improved, and market competition will drive the establishment of better industry norms, providing the consumers with higher-quality baby diaper products. The opportunity and growth points of maternal and infant industry will unfold around the rise of post-90s and post-95s mothers (mothers in towns, exquisite mothers, two-child mothers, etc.). This group has strong consumption consciousness and pays attention to product experience, so brand owners continuously introduce new products to

stimulate sales, and adopt diversified marketing strategies to attract new generation of consumer group.

From 2018 to 2021, the market share of national baby diaper brands has gradually increased in China, and OEM products and top brands have been updating to seize domestic stock market. How to get rid of homogenization and identify brand differentiation from disordered competition is crucial. The manufacturers of Chinese baby diaper brands focus on technological innovation and new product R&D to improve the intrinsic value of products.

The foreign trade of Chinese baby diapers has turned into net export from net import, and the price war has become fiercer. The raw material price was volatile in 2021, bringing challenges to manufacturers, accelerating industry reshuffle and showing obvious leading effect. Thus, the R&D innovation, digitalization upgrade and cost control capability of enterprises will facilitate the effective improvement of production efficiency and tackle dramatic market change accordingly.

Chinese traditional culture supports the development of differentiated products

With the rise of Chinese traditional style in Chinese baby diaper market, young parents' preference for Chinese goods became the mainstream. Consumption has polarized—both high-end products and cost-effective products occupy certain market share. When choosing baby diaper products, the post-90s parents are affected by diversified consumption trends, and product appearance is also important.

Chinese traditional culture plus thinness and breathability

In 2021, Anerle, a baby diaper brand under Fujian Hengan Group Co., Ltd., introduced soft and thin series aiming at young mothers' preference for Chinese goods in combination with the design of Chinese traditional style. The whole "core" is upgraded, continuing and refining the selling point of thinness, and the fit of product is enhanced, bringing better usage experience to babies.



New King Soft series diapers/pull-ups launched by Homebaby brand under Quanzhou Tianjiao Lady & Baby's Hygiene Supply Co., Ltd. adopt the whole-core structure, feature ultra-thinness and breathability, and are dry and breathable in any season.



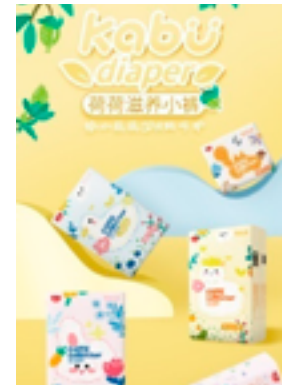
The wing series baby diapers/pull-ups launched by Abison brand under Dongguan Changxing Paper Co., Ltd. feature breathability and thinness, adopt integrated and thin composite core, and improve the breathability by 30%.

Chinese traditional culture plus skin care

The mid-to-high end brand Q-MO of Hengan Group introduced Fresh Air weak acid series baby diapers in 2021, catering to the demands and awareness of young, exquisite, middle class and high intellectual mothers on exquisite parenting. The product is made of fiber materials with weak acid pH fit for the skin of Chinese babies, maintains a weak acid environment fit for tender skin of babies, and reduces the possibility of diaper rash.

In 2021, Guizhou Kabu International Biotechnology Co., Ltd. launched E care pant-type diapers added with vitamin E on top layer and nourishing pant-type diapers added with jojoba oil on top layer, aiming at mid-to-high end. Jojoba oil extracted from jojoba by cold

press squeezing process is used for the top layers of baby diapers, skin-friendly, and non-irritating.



Hunan Suitsky Living Goods Co., Ltd. took the "reshaping" action in the company in 2021. "Reshaping" means product adjustment from the source, so that products satisfy the demand of young parents. Finally, "protecting sensitive skin, caring for babies" baby diaper series was launched on September 14, 2021, and each product of this series is added with distinct essence ingredients to protect the sensitive skin of babies.

New products introduced by DaddyBaby Co., Ltd. in 2021 aim at the mid-to-high end consumer group. The product launched via e-commerce channel is fashionable fruit POPO baby diaper. Natural essence extracted from fruit is used for top-layer nonwovens, rich in vitamin E factor, gentle, moisturizing and non-irritating, and can protect sensitive skin.



Chinese traditional culture plus Chinese elements

In 2021, Hangzhou Qianzhiya Sanitary Products Co., Ltd. successively introduced Miffy zero touch unstained series medical level diapers for Chinese mid-to-high end market and panda●● series diapers for third-tier and four-tier markets. The panda●● series adopts the design element of panda, and is cool and cute. Besides, the series has high quality, providing visual attraction and care for babies.



2021 is a great year for CASC. Chiaus (Fujian) Industrial Development Co., Ltd. took this opportunity to officially reach strategic cooperation with China Aerospace Innovation Center, realizing the combination of aerospace science and technology culture with maternal and infant healthcare, jointly introducing co-branded aerospace style “rosefinch” baby diapers for mid-to-high end, and blending traditional Chinese elements representing national spirit into the design concept of product.



Geographic pavilion China series baby diapers launched by Chikool brand under Mega Soft (China) Co., Ltd. adopt outer package with the element of the Great Wall, echoing with the two-layer heightened three-dimensional anti-leakage cuff design, highlighting the function of locking urine “like the wall”, and integrating Chinese elements ingeniously.



Taking the advantage of social media, opening a new marketing era

At present, the live streaming e-commerce on social media platforms has changed the situation of traditional e-commerce of Chinese FMCG, and the baby diaper manufacturers of mainstream Chinese brands have actively made arrangement. In addition to traditional e-commerce channels, such as Tmall, Taobao and Jingdong, the marketing channels have become more diversified, including social e-commerce, trust e-commerce, interest e-commerce, etc.

With significant changes in the levels and structures of different channels, the marketing strategies of various platforms need to be recombined to form resultant force. Traffic bonus channel has gradually become the “main battlefield” of marketing, while traditional channels are the “harvest field” of sales, providing more mature shopping experience. Moreover, the input of various expenses will be adjusted accordingly based on different stages of channels.

The marketing proportion of Hengan Group in short video live streaming platforms such as Tik Tok and Kuaishou exceeded 20% in 2021.

The sales proportion of Qianzhiya in traditional e-commerce platforms (Jingdong, Tmall and Pinduoduo) was 15% or so, and the company has gradually established the social marketing channel of short video platforms such as Tik Tok, Kuaishou and Tencent video account, empowering the dealers to sell on social media platforms. The original intention of social media customers is primarily amusement, so the company attracts the customers mainly by large discount via big sales or a number of gifts, which accounts for about 1% in total sale. Social e-commerce, as a form of e-commerce that is centered on people and formed by social relationship, forms word-of-mouth effect by user sharing and communication rather than the sales model of product search and display, thus arousing consumer demands.

DaddyBaby has made overall arrangement actively, building the teams for anchors, short video

marketing and content planning, and establishing fan management matrix for omnibearing promotion through new marketing channels, such as Tik Tok, Kuaishou and Xiaohongshu. Now its social media marketing accounts for 3%, and is expected to reach 15%-20% in 2022 since it is increasing at a higher rate.

Meanwhile, Chiaus built an overall live streaming business group, and there are two departments directly serving the live streaming teams of Tik Tok, etc. The sales volume exceeded one million in the first month when the business group went online, and realized 300% growth in the following month. Now it has become a key part of Chiaus incubation business. Traditional e-commerce platforms put particular emphasis on overall effect conversion and repurchase aiming at target consumer group, while the marketing targets of social media channels are generally brands and consumers, reaching more people off-site through creative content, and realizing brand exposure and brand reputation increment by means of social contact and digital marketing.

The marketing of New Yifa Group on Tik Tok, Kuaishou and other short video platforms accounts for about 20%, and is mainly centered on two points: hot products and IP.

Guangdong Winsun Personal Care Products Co., Ltd. established the social media marketing channel of baby diapers in 2021. By comparing the consumer groups of Jingdong, Tmall and Pinduoduo, the company found that consumers on social media are more price-sensitive, and apt to impulsive consumption, and have higher requirements on the anchors of platforms.

Guizhou Kabu mainly releases information flow on traditional e-commerce platforms (Jingdong, Tmall and Pinduoduo), and starts to sell products through live streaming on Tmall and Taobao, and its product sales is concentrated in flagship stores. The marketing on social media platforms is now concentrated in Tik Tok and focused on creating brand atmosphere, and accounts for about 5% in total sale.

The company said that, live streaming on Tik Tok is getting better, so its ratio will continuously increase.

Hunan Suitsky allows the consumers to buy baby diapers at advantageous price through group buying by sharing via Pinduoduo in addition to traditional e-commerce platforms including Tmall and Jingdong. It established the marketing channel of Tik Tok, giving priority to content operation and short video production in earlier stage, supplemented by sales output. At present, its sales proportion accounts for 32% on Tmall, 20% on Jingdong, 3% on Pinduoduo and 5% on social media.

Dongguan Changxing Paper has established official accounts and stores on various platforms to further expand the marketing planning of new channels. According to the company, one feature of social media marketing is the promotion strategy very different from traditional e-commerce. On social media, live streaming shopping influencers are welcomed, while traditional e-commerce platforms primarily rely on brand owners to attract their own fans.

Quanzhou Tianjiao has been establishing the social e-commerce channel step by step, which accounts for about 10% in total sale in 2021. It believes that, the marketing promotion of social media platforms needs long cultivation and interaction to form private traffic and higher customer loyalty.

Continuous efforts on the maternal and infant channel

In 2021, the COVID-19 pandemic in China has entered a stage of normal prevention and control, and offline maternal and infant market has gradually recovered. The maternal and infant channel is a main channel for baby diaper sales, so main manufacturers still need to continuously make efforts in this field, and its development characteristics are mainly as follows:

Definite product positioning and customized development

Mainstream enterprises of Chinese baby diaper brands continuously develop the maternal and infant channel, and are characterized by

definite product positioning and customized product development. The sales proportions of Guangdong Winsun and Guizhou Kabu on the maternal and infant channel are 50% and 85% respectively, and the two companies aim at middle grade and mid-to-high grade products respectively. Hengan Group realizes the sales proportion of nearly 30% on the maternal and infant channel, and develops customized special product series for the customers of the channel, so as to adapt to the purchase characteristics of young consumer groups in different regions. Its Q-MO brand attracts the mid-to-high end users of the maternal and infant channel. Qianzhiya mainly sold the products with high quality and medium or high price on the channel in 2021. Quanzhou Tianjiao Co., Ltd. developed diversified product sales channels, and aimed at mid-end products on the maternal and infant channel, and the channel accounted for 13% and will continuously decrease mainly affected by the accelerated construction of social media marketing channel.

Furthermore, Chiaus and New Yifa Group have introduced medical level baby diapers on the maternal and infant channel. The cooperation between Chiaus and maternal and infant stores is now mainly in charge of offline channel department, the sales of maternal and infant stores accounts for 2%~3% of offline sales, and the brand sold is Vowbaby. Vowbaby Yuaiyinli series baby diapers are oriented at mid-to-high end medical level products. The sales proportion of New Yifa Group on the maternal and infant channel was 20%, and its products are oriented at differentiated high-end medical baby diapers.

Aiming at young consumer group, differentiated positioning, improving experience

At present, the sales proportion of Suitsky on the maternal and infant channel is 35%, and Suitsky mainly sells mid-to-high end products through the channel of maternal and infant stores. The company upgraded its products in September 2021, making them more high-end and attractive and meeting the needs of young mothers. It targets post-90s and post-95s mothers,

better satisfying their demands for product appearance and quality. The future strategy of Dongguan Changxing Paper on the channel is to carry out differentiated product positioning according to the consumption characteristics of local customers and meet the demands.

The sales proportion of DaddyBaby on the channel of maternal and infant stores is 30%. In 2021, its sales positioning of the channel was to comprehensively improve supply, channel power, brand power and service ability, constantly expand the offline market and make consumers enjoy excellent experience.

This targeted survey shows that Chinese mainstream brand owners of baby diapers had more differentiated characteristics and positioning in product R&D, and accurately integrated Chinese traditional culture in 2021. By aiming at young consumer group, China-made baby diapers have gradually won the favor and trust of Chinese consumers. The manufacturers blended marketing into short videos and other social media, and improved the cultivation and interaction of users, thus realizing better development!

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In today's highly specialized and competitive market every little mistake can undermine the success of a company.

The standards required are always higher: in addition to aspects such as production speed, accuracy in order fulfilment and punctuality in deliveries, great importance is obviously given to the quality and integrity of the final product. What solutions to adopt, therefore, to guarantee the high standards required by the market while optimizing process costs?

Among the answers there is certainly process automation, starting from production and coming to the handling, labeling, packaging and warehouse management operations. Often, due to errors during one of these final stages or during transport, the packs of reels delivered may not meet the customer's quality standards, despite the high quality of the product supplied. All this can lead to complaints or the loss of future orders, with an impact in both economic and brand reputation terms.

The final packaging process plays a fundamental role in protecting and preserving the paper, tissue or nonwoven reels so that they arrive at their destination in the same conditions as they left the production line. So let's see how and why an automatic packaging process can help you preserve the quality of your products.

How to preserve the quality of the reels thanks to automatic packaging

The packaging process involves a series of steps - transporting the reel from the production line to the packaging line, labeling, composing the reel bundle, applying the protective film and possibly palletizing - which can be crucial to preserve the quality of the reels or to ensure their integrity during transport to the end customer.

Using automatic packaging and reel handling systems it is possible to:

- Eliminate or significantly reduce the risk of contamination: reels can be moved along the various stages of the packaging process by means of conveyor belts or Automated Guided Vehicles (AGVs) and manipulated by means of robots, minimizing interaction with operators or surfaces that could cause contamination.
- Greater precision and consistency of the packaging process: compared to manual operations, an automatic packaging system allows you to create uniform and resistant packaging without wasting resources, as the machine uses exactly the amount of protective material required from time to time while ensuring a consistent packaging quality.
- Greater quality control during the entire process: an automatic packaging system can be integrated with the product control systems of the upstream line, allowing the tracking and segregation of any defective reels. It is also possible to check the quality of the reels produced, identifying any errors or discrepancies and correcting them before packaging and shipping.
- Guarantee of compliance with the customer's packaging needs: by integrating the packaging system with the customer's ERP it will be possible, among other things, to ensure the perfect compliance of the packs obtained with the specific needs of the end user. In addition, the packaging system will automatically take care of printing and applying the necessary labels, avoiding another possible source of complaint.

A.Celli R-WAY® Automatic Packaging System

A.Celli offers a modular, flexible and highly customizable reel handling and packaging system, adaptable to any layout and to any production line, but above all capable of preserving the quality of your paper, tissue and nonwoven reel packs until they are delivered to the customer.

The quality of the reel can be constantly monitored thanks to the integration with the DMS (Defect Management System), the defect management system present on the winding and packaging equipment. It will be possible to integrate the DMS with the defect inspection system, allowing their tracking, analysis and removal thus avoiding the sending of non-compliant reels to the customer.

When it comes to the risk of contamination, it can be eliminated thanks to various specific solutions offered by A.Celli, such as the use, when required, of stainless steel surfaces for trolleys and belt conveyors or Teflon-coated rollers, in addition to use of robots able to reduce the number of interactions between reel and operator.

The A.Celli automatic packaging system can also be integrated with various ERPs and is able to provide structured access logs and tables in which production orders and details of the individual reels and bundles processed can be stored, also ensuring perfect alignment of operations with the customer's packaging recipes. Finally, A.Celli offers, among the various options its iREEL solution: a reel data tracking and archiving system that allows you to keep the detailed history of the product, certifying the quality of both the final reel and of the entire value creation chain.

Conclusions

Automatic packaging systems can help your company thrive in the paper, tissue and nonwoven industry by preserving the quality of the products made and reducing time and costs, ultimately allowing you to offer your customers exactly the products they desire.

If you want more information on the advantages of an automatic packaging system, download now A.Celli free eBook *"The ultimate guide to Automatic Reel Packaging"*!

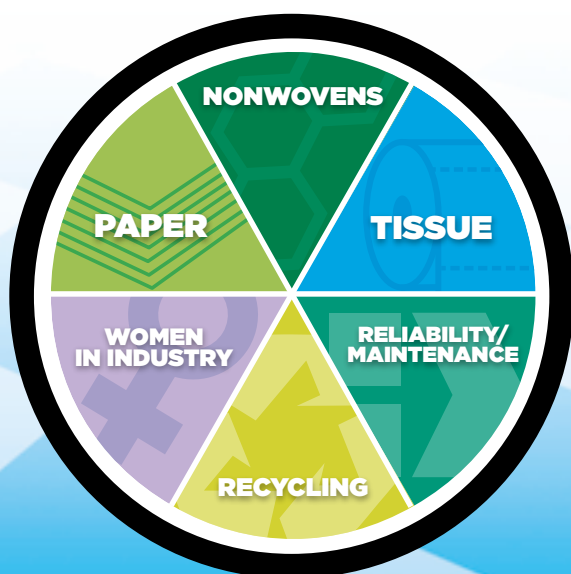
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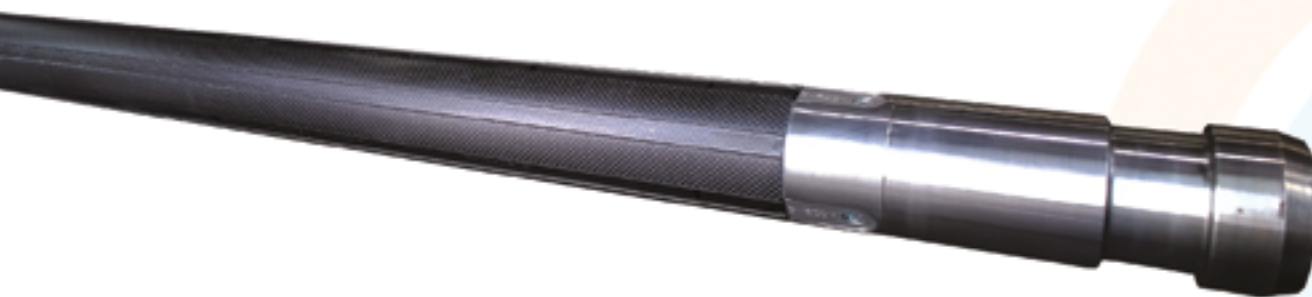
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New expanding, multi-bladder shaft for counter-roller tissue rewinding machines delivers better energy efficiency, tissue production and operator control precision

The Italian technology company Svecom-P.E. has introduced a new patented expanding shaft made entirely of carbon fiber, CF. The new multi-bladder expanding shaft has three ledges and offers mechanical properties which are unique in the market. A major benefit of the new CF shaft is that it now lets operators exceed the usual speed limits for 3" core diameters on tissue rewinders, thus allowing them to run at mechanical speeds of over 1200 m/min.

Reach operating speeds four times faster

The new 100% CF multi-bladder expanding shaft has been specifically designed to meet today's higher technical requirements on counter-roller rewinding machines. This makes it possible to get very fast acceleration and deceleration times and also reach the operating speed much earlier than traditional shafts. Operating speeds are reached four times faster compared to traditional shafts, consequently increasing the overall productivity.

The light nature of carbon fiber also allows much higher maximum operating and peak speeds, with no vibrations from the shaft while achieving them. Critical speeds increase significantly: +98% compared to steel shaft, +119% compared to aluminium shaft, +35% compared to aluminium shaft with carbon inserts (Fig. 1).

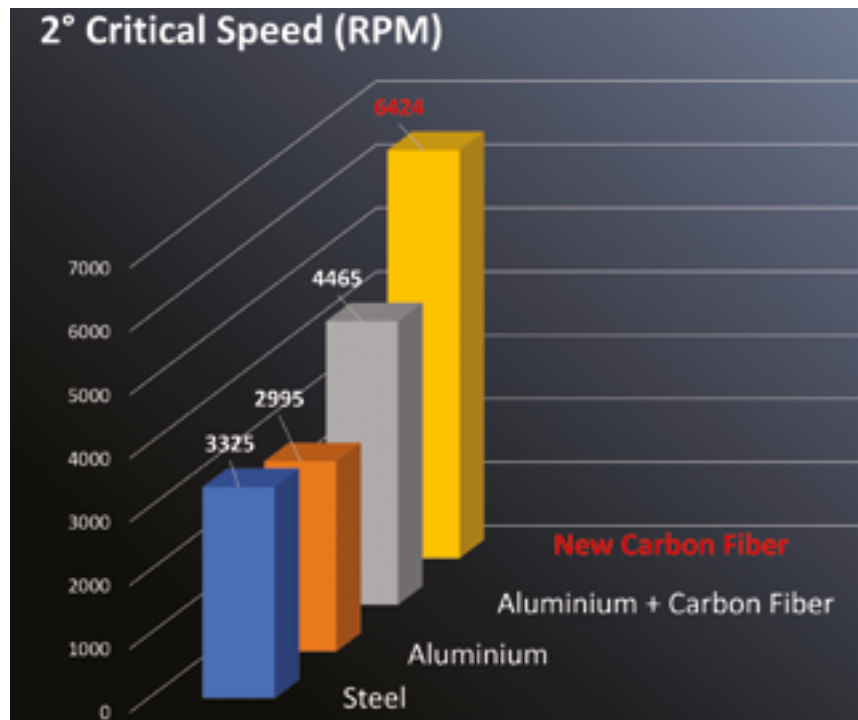


Figure 1: Carbon fiber offers much higher critical speeds, compared to traditional and hybrid shafts

Lower weight gives benefits too

As a further benefit, carbon fiber shafts have a lower specific weight, thus reducing the energy required to operate them in the machine. The specific weight is 65% lower than steel shaft, 20% lower than aluminum shaft and 32% lower than a carbon shaft with aluminium inserts (Fig. 2)

A higher elastic module also gives greater stiffness and consequently, upon application of a high load, it will undergo minimal deformations.

The 100% CF expanding shaft represents a real revolution for such expandable systems and is an innovation based upon Svecom's lengthy experience with these materials, as well as close collaboration with a leading company in the carbon sector for military and sports applications. The 100% CF solution allows a wide range concerning the geometry of shafts, and therefore the ability to satisfy the customer's needs.

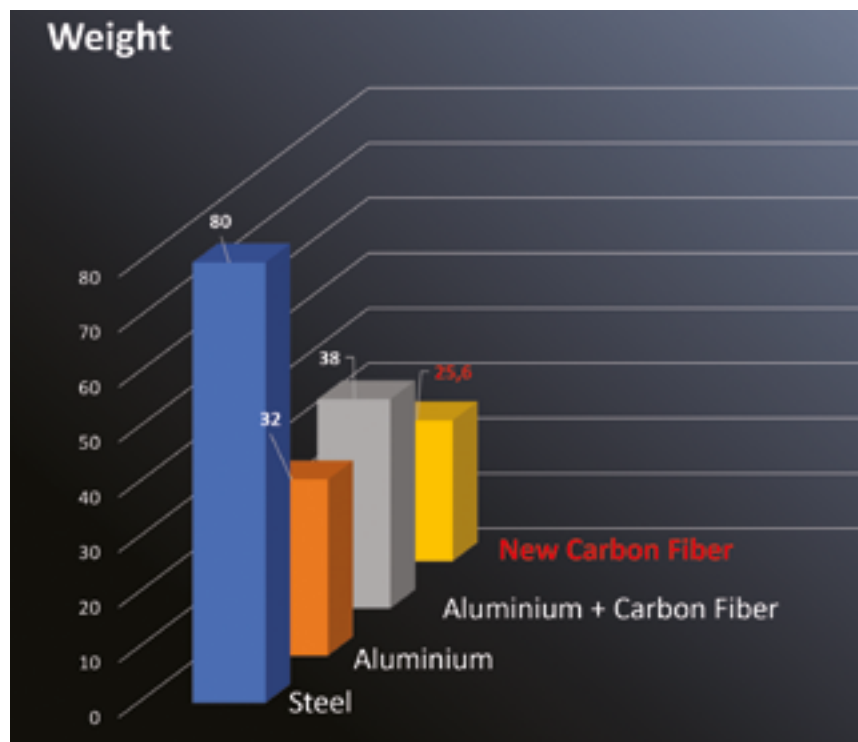


Figure 2: Weight is greatly reduced as well, giving numerous benefits.

Material	Bearing Ø	Expansion	UTS (N/mm2)	E.M. (GPa)	Inertia (cm4)
Solid steel (Fe510)	74 mm	3 centering ledges + 3 gripping ledges	510	210	88.87
Aluminium	74 mm	3 centering ledges + 3 gripping ledges	310	70	88.87
Aluminium + carbon	75 mm	3 gripping ledges	310	165	110.84
New carbon	75,2 mm	3 gripping ledges	1521	250	90.66

Figure 3: Specs and mechanical advantages of 100% carbon fiber shaft compared to the other types. In particular, CF has a better UTS (Ultimate tensile strength) and a higher EM (elastic module).

ANDRITZ AT IDEA 2022

ANDRITZ will be presenting its innovative nonwovens production and textile solutions at IDEA 2022 in Miami, USA, from March 29 to 31 (booth 4104). The broad ANDRITZ product portfolio covers state-of-the-art nonwovens and textile production technologies such as air-through bonding, airlay, needlepunch, spunlace, spunbond, wetlaid/ Wetlace™, converting, textile finishing, recycling, and natural fiber processing.

WHAT ARE THE HIGHLIGHTS FOR IDEA 2022?

NEWS IN WIPES TECHNOLOGY DEVELOPMENTS

ANDRITZ offers various nonwoven processes to produce best and cost-effective wipes, like spunlace, Wetlace and Wetlace CP. ANDRITZ also accompanies nonwoven producers in the move to sustainability with the aim of reducing or eliminating plastic components while maintaining the high quality of the desired product properties. This applies to all types of sustainable wipes, such as flushable, biodegradable, bio-sourced, carded-pulp or standard carded wipes. Indeed, hydroentanglement has the advantage of being able to bond any kind of fibers without the use of chemical binders or thermal fusion. It is, therefore, the most suitable bonding process for

natural fibers, such as pulp, cotton, hemp, linen, flax, bamboo, and more. The latest development in this field is the ANDRITZ neXline wetlace CP line, which integrates the card-pulp (CP) process. This is a fully engineered production line combining the benefits of drylaid and wetlaid technologies to produce a new generation of biodegradable wipes.

In order to make a meaningful contribution, ANDRITZ has become a member of the Board of the Responsible Flushing Alliance (RFA) in the USA. The RFA is an independent, non-profit trade association committed to educating consumers in responsible and smart flushing habits to help reduce damage to the nation's sewage systems. ANDRITZ is deeply involved in this topic with its technologies for 100% dispersible and biodegradable wet wipes and is highly committed to being part of the RFA.

To serve customers even better and offer the best possible R&D and service, ANDRITZ welcomes producers to its spunlace technical center at ANDRITZ Perfojet in Montbonnot, France. It is equipped with the very latest technologies as well as a dedicated team of process engineers. The technical center has been upgraded just recently with an inline pulp formation system and is now the most advanced nonwovens test center for wipes worldwide. The line configuration is now similar to an ANDRITZ Wetlace CP line.

LATEST TECHNOLOGIES FOR HYGIENE APPLICATIONS

ANDRITZ will highlight the technology development in the spunlaid sector with the patented nonwovens process called Spunjet Soft. This is the in-line hydroentanglement of continuous filaments, creating a new generation of premium spunlaid nonwovens with

unrivalled bulkiness and softness compared to standard spunbond fabrics. Samples of absorbent hygiene products integrating spunjet soft materials will be available at the ANDRITZ booth.

Moreover, ANDRITZ will introduce its adult pants converting line, which offers top-class components and an innovative technology process. The growing market for adult incontinence products has resulted in a state-of-the-art process with highest quality standards, such as the development of ultrasonic side seam solutions with excellent results in terms of bond strength and system reliability.

As a result, operations and size changes are faster and easier. The modern forming system for higher SAP (superabsorbent polymers) concentration and the turning and placing system guarantee maximum process stability and put the adult pants produced by ANDRITZ customers at the top of the adult hygiene market.

INNOVATIONS IN SOLUTIONS FOR DURABLE APPLICATIONS

Another strong focus lies on technologies for durable nonwovens, especially for the automotive industry. The use of nonwovens in the automotive area has increased substantially in recent years.

Indeed, a very large number of automotive parts are made with nonwovens fabrics, from trunk liners, carpets and insulation to air and fuel filters. In addition, the automotive industry is moving its focus to green technologies, which has a direct impact on the characteristics of nonwoven parts in vehicles.

Thanks to the ANDRITZ airlay and needlepunch processes, producers are able to provide the most suitable fabrics for this industry's requirements.

The ANDRITZ airlay technology can process all types of fibers and solid particles. It is offered as a complete line with needlelooms, thermobonding or other bonding methods for numerous applications in the automotive and also the furniture, bedding, insulation, and filtration industries.



ANDRITZ airlay technology

In addition, ANDRITZ is presenting the brand new ProWin™ technology for profile weight correction in the needlepunch segment, which is used to optimize processes, provide a faster return on investment, and save raw materials. This unit combines the well-known systems ProWid and ProDyn, enabling even better performance, and the same machine can run faster with less mechanical stress.

Customers are welcome to conduct trials and compare the different options available in the technical center for needlepunch processes at ANDRITZ Asselin-Thibeau, Elbeuf, France, and/or in the airlay pilot line at ANDRITZ Laroche, Cours, France.

Another very relevant topic these days is textile recycling, which has become a key focus of worldwide sustainability efforts. Customer and consumer awareness as well as new regulations are pushing clothing brands to recycle their pre-consumer and post-consumer waste in their own products.

ANDRITZ is very much involved here with its technologies for textile recycling and processing of recycled fibers.



ANDRITZ Diatec adult pant line

SPOT-ON AND DIGITAL SERVICE TO KEEP MACHINES RUNNING

ANDRITZ offers a full-service portfolio and thus can ensure improved uptime, productivity, and product quality – for years to come. This includes on-site support, specific training, line audits and troubleshooting, upgrades and modernizations, spare parts, and roll repair centers. In the USA, ANDRITZ is well supported in sales and service by its local branches – ANDRITZ Küsters in Spartanburg, SC, and ANDRITZ SHW in Torrington, CT.

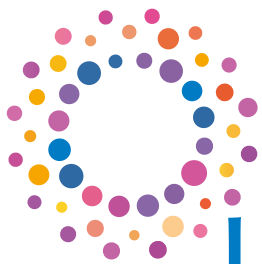
Moreover, customers can bring their production to a new level with ANDRITZ digital technologies combined under the Metris technology brand. One focus is the Metris UX digitalization platform, which provides full support for industrial plants throughout their entire life cycle. It combines a complete set of functionalities for professional production management, simulation and optimization using the latest artificial intelligence methods, plus cyber security, and condition monitoring with smart sensors in an integrated approach. ANDRITZ will offer a live demonstration at its booth (4104) at IDEA.

VISIT THE ANDRITZ BOOTH – PHYSICALLY AND DIGITALLY

A special highlight for IDEA is the virtual booth called the “ANDRITZ Teleport”. For customers who cannot travel to Miami due to the travel restrictions, ANDRITZ offers the opportunity to enter this booth and discover state-of-the-art technologies, obtain the latest marketing material and press information, and meet the ANDRITZ team. The entire ANDRITZ Nonwoven team is looking forward to welcoming customers to its booth (4104) in person and online in the “ANDRITZ Teleport” virtual booth.



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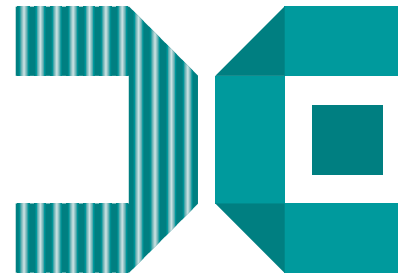
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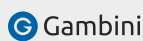
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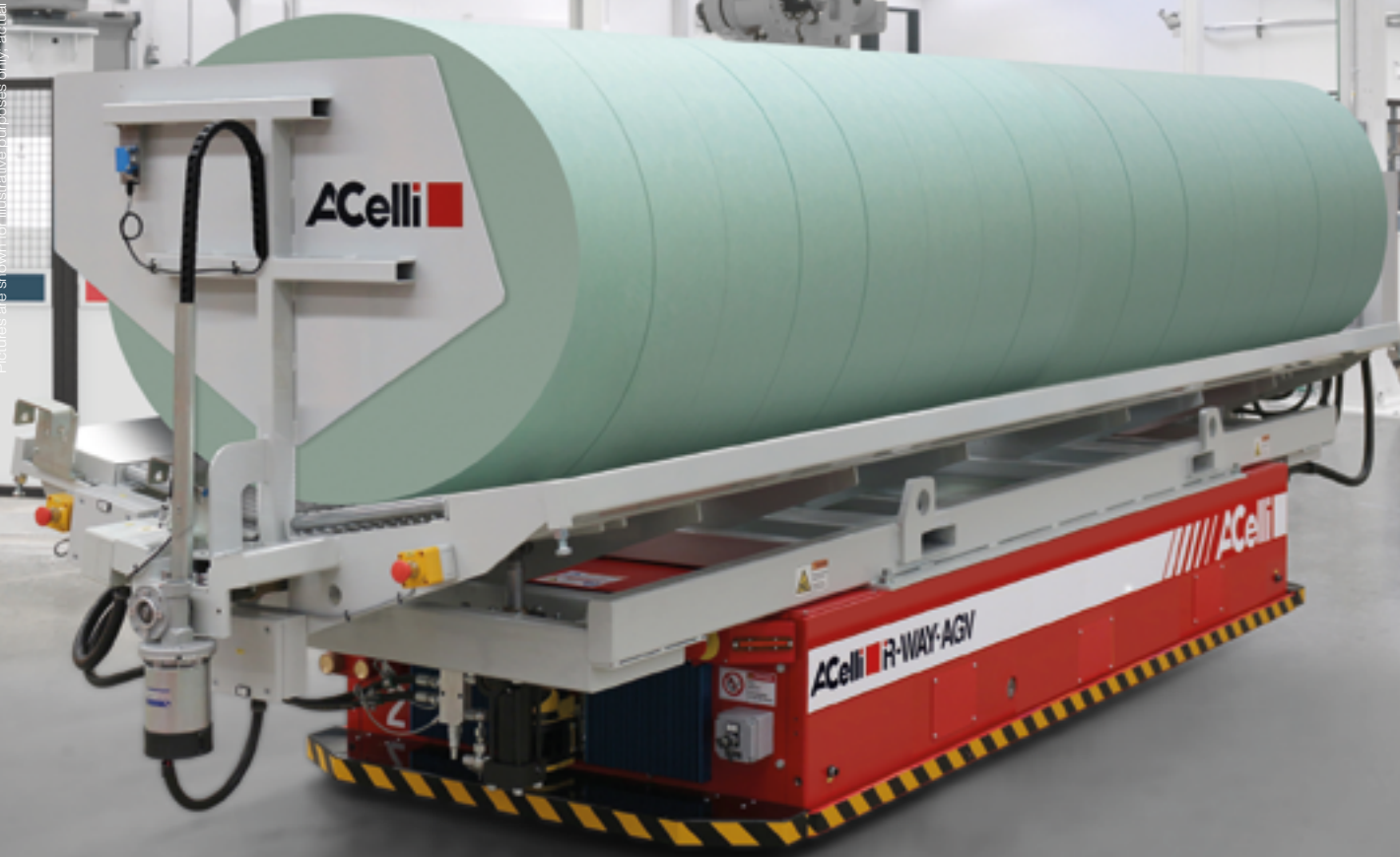
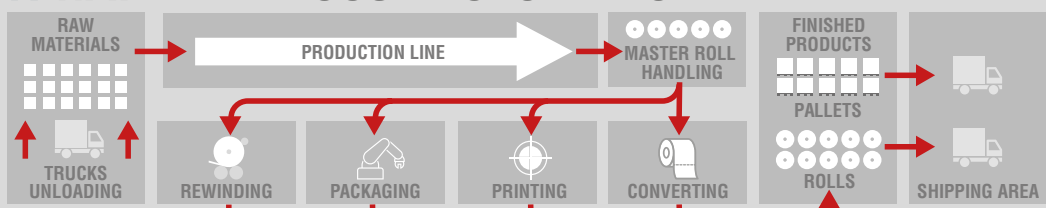
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