

Moving forward in tissue with flexibility







To go forward and keep ahead of the game in the demanding world of tissue production you have to be able to move fast. Flexibility is now a necessity as switching grades and qualities has become the new reality in tissue production. Utilizing hybrid technology, Valmet's new range of Advantage NTT and QRT tissue machines now have flexibility built in at their very heart and will allow you to swing between plain, textured and structured tissue products.

As well as unique flexibility, the Advantage NTT and QRT range also gives excellent softness and high bulk using less energy and fiber per roll. Valmet Hybrids - for maximum flexibility in tissue making. Read more at **valmet.com/hybrid**





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SOUTH AFRICA

Sappi taps Toscotec for TT SYD Steel Yankee Dryer

Toscotec has received an order from Sappi to supply a TT SYD Steel Yankee Dryer to their mill in Stanger, South Africa. The TT SYD was delivered in record time only 20 weeks after the order. The start-up is planned for the third quarter of 2021.

The cylinder was shipped off from Toscotec's fully integrated and innovative TT SYD Technology Center in Massa (Italy), where Toscotec manufactures all its steel Yankees. The Center is conveniently located three kilometers away from seaport to expedite shipping operations of large diameter Yankees. The scope of supply includes the Yankee steam and condensate system and Toscotec's patented head insulation designed to ensure maximum thermal energy efficiency. Toscotec will provide the complete project management, erection supervision, commissioning, and start-up assistance.

Nash Ayer, Procurement Manager at Sappi Southern Africa Ltd., comments, "We decided on Toscotec because they met our foremost selection criteria of high energy efficiency and reliability. The choice of leading-edge technology such as TT SYD that will increase the energy efficiency of our tissue line is part of our strong commitment to climate-smart solutions. Given the short timeframe we had on this project, Toscotec gave us their full support by shortening the delivery time."

Fabio Bargiacchi, Toscotec's Sales Manager, says, "We are glad to start a new cooperation with Sappi, one of the largest and most innovative pulp and paper producers worldwide. The 20 weeks delivery time obviously posed a big challenge but Toscotec achieved an outstanding result by tapping into the great manufacturing flexibility of its TT SYD Technology Center. With this order, Toscotec further strengthens its position in South Africa, where we have been awarded six new projects in the last 5 years."

Established in 1936, Sappi is a leading global provider of products made from woodfibre-based renewable resources, including raw materials (dissolving pulp (DP), wood pulp and biomaterials) and end-use products (tissue, packaging and specialty papers, graphic papers, casting and release papers, and forestry products). It operates 19 production facilities in Europe, North America, and Southern Africa, manufacturing 5.7 million tpy of paper, 2.4 million tpy of paper pulp, and 1.4 million tpy of dissolving pulp. Sappi's global sales and distribution network reaches over 150 countries..



HUNGARY

Vajda Papír to boost tissue capacity

Toscotec will supply an AHEAD 2.2L tissue line on a turnkey basis to Vajda Papír at its Dunaföldvár mill, near Budapest, Hungary. The start-up is planned for the first half of 2022.

The new AHEAD 2.2L machine features a net sheet width of 5,600 mm, a maximum operating speed of 2,200 mpm, and a production capacity of over 80,000 tons/year. The machine is equipped with the fully hydraulic TT Headbox-MLT, TT NextPress of upgraded design, a third-generation TT SYD, gas fired TT Hood and Air System engineered with several steps of energy recovery.

Attila Vajda, owner and managing director of Vajda Papír, says, "We found in Toscotec the right partner to realize our expansion strategy according to plan. Based on their extensive experience with turnkey operations, our confidence in Toscotec's ability to successfully complete complex tissue projects on a tight timeframe was a key factor in our decision. At Vajda Papír we select the most advanced and energy efficient technology to manufacture premium tissue quality for our customers and consumers."

Marco Dalle Piagge, sales director of Toscotec, comments: "We are very happy to begin an important partnership with Vajda Papír. Toscotec strengthens its position as global

leading supplier of turnkey solutions for the tissue industry. Delivering a complete tissue line on a turnkey basis according to schedule, and assuming responsibility for the achievement of performances for the entire supply requires significant expertise. We are the only tissue machinery manufacturer with nearly 20 years of experience in turnkey projects across 4 continents."

Matteo Giorgio Marrano, Toscotec sales manager, says, "With Vajda Papír's order, Toscotec increases its market penetration in Eastern Europe with three major tissue projects sold in the last two years, including two double-width machines. This new line will be equipped with advanced and energy-efficient technology, including Toscotec's shoe press and TT SYD of latest generation, and high-recovery TT Hood."

Founded in 1999, Vajda Papír is headquartered in Budapest and operates 3 sites in Budapest, Székesfehérvár and Hungary's biggest and most modern integrated tissue mill at Dunaföldvár, south of Budapest. It manufactures 110,000 tons/year of toilet tissue, handkerchiefs, towels, and napkins. Vajda Papír owns the famous brands Ooops, Sindy, Star and Lilla and distributes its products to the consumer and AfH markets in Eastern Europe.



Vajda Papír Dunaföldvár mill, near Budapest, Hungary.

ITALY

Warm-up Contactless Körber's breakthrough innovation and the first ever to use electromagnetic induction heating for embossing

Körber introduces Warm-Up Contactless, a hot embossing system for greater product volumes, which does not require modifications of the embossing rolls and does not use liquids at high temperatures. Körber has found a solution to market challenges with a safe product that saves time, energy, and space

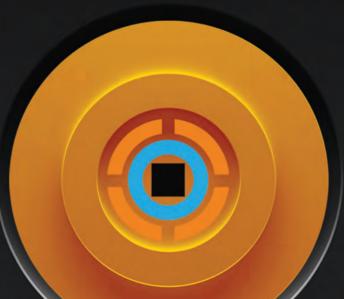
Luca Frasnetti. Chief Technology Officer at Körber Business Area Tissue, comments: "Conventional hot embossing systems had disadvantages that we were determined to overcome. First of all, safety: traditional systems require dedicated areas within the factory; to heat the rolls, hundreds of litres of water or oil at high temperatures and pressure were needed, a big problem in case of leaks or breakage. Secondly, there is an expenditure of energy because it is necessary to heat the entire roll, and not just the external tips, which are actually used for embossing. Finally, time: it takes at least an hour to reach the necessary temperature. We have overcome these problems by introducing a new type of heating, widely used in other sectors, such as the automotive one, but barely used in the tissue sector: induction. Our Solution is Warm-up Contactless, the first patent pending induction system that provides the advantages of hot embossing without modifying the rolls." There are several advantages to the system: hot embossing increases volume of the product by up to 20%. In the case of Warm-Up Contactless this is an eco-sustainable process

because it reduces heating times by 1/3, saving energy by over 60%. It also makes the system safer because it eliminates the passage of liquids at high temperatures and pressure surges on the line. As well as being easy to apply to existing machinery, it involves no changes to the engraved rolls, offering the possibility of using hot embossing with any existing roll. The system is designed not to interfere with the operator's work such as web thread up and rolls changeover. Moreover, if combined with first-rate rewinding technology Perini Constellation, our Warm-up Contactless system maximizes the reduction of the amount of paper needed to produce high-volume products, with a more streamlined design compared to complex and fragmented configurations where paper is first moistened and then dried. Frasnetti concludes: "Worldwide, the Körber Business Area Tissue has over 100 people employed in Research and Development, with three innovation centers in Italy and two centers in China. We develop over 60 projects every year, 10 of which are breakthrough innovations. Warm-up Contactless is one of these, developed in just 14 months, also thanks to the collaboration between our Research and Development and InnovaLab, a spin-off of the Electrothermal Laboratory of the University of Padua. Our strength is building ecosystems that solve customers' problems, which is why stable collaboration with universities are essential to achieve



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 for non-stop machines

MOD. 714 MZ-L

Pneumechanical chuck with leaves

MOD. 200

Single column shaft puller

MOD. 700

Tilting table



















Körber presents the first Manufacturing Operations Management (MOM) solution developed specifically for tissue converters

Digitization is a worldwide trend that everyone is catching up to: the goal of manufacturers is to create their own smart factory solution that, thanks to digitization and computerization, is able to better organize operations by connecting the business side and the production side. The benefits of a digital factory are real: the increase in production efficiency comes from the ability not only to use production lines to the maximum, but also to better organize the workforce by optimizing resources and reducing waste. However, the tissue sector has specific needs and requires partners who can fully understand them. This is why Körber responded by seamlessly combining two of the Group's areas of expertise: the converting part of the Körber Business Area Tissue and the software part of Kodis, a company specialized in the integration of systems and industrial software. Sebastian Jhon Nino Digital Sales Representative comments: "At Körber in recent months we have worked to achieve the convergence between lean manufacturing and factory digitalization, creating strategic value for our customers with innovative solutions to increase the efficiency of production sites. Combining their expertise, Körber Tissue and Kodis have developed Tissue MOM, the Manufacturing Operations Management (TMOM) solution created specifically for tissue converters".

TMOM is a complete solution that allows real-time control of the four areas in the factory: production (MES), quality, maintenance, intralogistics, and warehouse processes.

The modules suite is able to manage the manufacturing process from end-to-end, such as production recipes, electronic job instructions and order requirements for ERP (Enterprise Resource Planning), reporting production performance results and the materials utilized. The advantages of using TMOM are:

- OEE improvement, thanks to work planning and a reduction of hours dedicated to measurements, inspections and reports
- Reduction of waste, typing errors, complaints, inefficient warehouse management and downtime
- Ease of use: TMOM can be used by any type of user and can be used for both mobile devices, industrial PCs, and desktops.

Franco Franceschi Performance Services Manager concludes: "Both belonging to the Körber Group allows us to meet the most demanding customer needs in terms of speed, choice, and technologically advanced solutions, while also being able to draw on the technological expertise of approximately 10,000 Group employees. TMOM is the result of this collaboration that has combined the expertise of the most advanced and complete supplier in the world of tissue technologies with one of the biggest experts in integration of production systems ".



UKRAINE

A.Celli Paper to supply a tissue production line to Kochavinska Paper Factory

A.Celli Paper is proud to announce that it will supply a tissue production line to the European tissue brand Kochavinska Paper Factory JSC, one of the Ukrainian leading producers of base paper and sanitary tissue products manufactured from waste paper.

A.Celli Paper's scope of supply comprises a complete tissue production line including an high efficiency iDEAL® START 1.500 tissue machine, equipped with an iDEAL® Forged_YD Yankee cylinder. The new tissue machine, highly appreciated for low consumption, convenience and compactness, will have a design speed of 1.500 m/min with a reference production up to 80 t/d. An R-WAY® reel handling system and a three-ply E-WIND® T80S slitter rewinder complete the supply.

The supply will feature A.Celli Paper's state-of-the art tissue technology, including two complete stock preparation lines, one for long fibers and one for short fibers. Top-notch mill engineering and a wide array of services provided by engineers with extensive experience in design and field activities are also included in the scope. Furthermore, the delivery will include an A.Celli Paper advanced DCS controls, innovative industrial automation applications and integrated systems.

The manufacture of the machinery will take place in Lucca, Italy and is expected to complete within 12 months.

The Project assumes the construction of a facility for the production of pulp-based tissue products to meet growing demand for high quality tissue products. It will enable Kochavinska Paper Factory JSC to enter the higher quality retail tissue segment, double its tissue production capacity and improve operating efficiency.

"We are very pleased to have signed this agreement with A.Celli, and we are proud to be developing our plans for technical and commercial expansion using the advanced technologies they offer," said the Head of the Supervisory Board and a major JSC Kochavinska Paper Factory. Mr. Mikhail Tytykalo, and the Head of the Board Mr. Roman Pyrig. "The iDEAL PM line for hygiene products, which will be the heart of our factory, guarantees us great flexibility in production, high product quality and a big advantage in terms of energy savings. The success of our proposal depends on these decisions".

Kochavinska Paper Factory is one of the largest producers of recycled base paper and tissue and is located in western Ukraine. The company dates back to 1938, when the plant was built with the involvement of experts from Germany, Poland and Sweden. In the 1990s, the factory underwent voucher privatisation and is currently owned by 173 shareholders.



A.Celli iDEAL® START 1.500 tissue machine



GERMANY

Ontex Mayen to cease manufacturing

Ontex will gradually phase out manufacturing at its plant in Mayen (Germany) will be gradually phased out by mid- 2022. Mayen will become an excellence center for Global Process Engineering, Global Product Technology and Market Adaptation Baby Care, and thereby will be instrumental to bring innovations faster to our consumers.

To return to profitable growth, Ontex is conducting a worldwide business review, including a focus on the most efficient use of production assets. Production in Mayen is being wound down due to the impacts of legacy contract losses and softer market trends on revenue.

Despite the improvements achieved under other efficiency actions in recent years, these efforts were not enough to compensate the drop of volume and achieve competitiveness.

Ontex expects an impact of around 350 full-time equivalent jobs on a total of around 500. The company will work to redeploy employees where possible and will continue to engage with its social partners in Mayen to find the best solution feasible for all affected.

"Choices needed to be made, and as Mayen's production capacity was not fully utilized, we have decided that Mayen's role in the group will be to focus on Global Process Engineering and Global Platform Innovation for the Ontex Group, and be one of the driving locations to bring innovation even faster to the market", said Markus van Gumpel, Vice President, Manufacturing Europe, Ontex.

The Global Excellence Center will be operational as of January 2022.

THAILAND

A.Celli starts up the E-WIND® T100 rewinder supplied to Berli Jucker Cellox

A.Celli started up the rewinder supplied to Berli Jucker Cellox Co. Ltd, a subsidiary of the Berli Jucker Public Company Limited (BJC), in full compliance with the agreed time despite the difficult situation caused by COVID19 pandemic.

The A.Celli E-WIND® T100 Tissue rewinder was designed to process 3,000 mm diameter paper rolls with a width of 2750 mm and a basis weight ranging from 13 to 45 gsm, all at an operating speed of 1700 m/min. This will enable Berli Jucker Cellox Co., Ltd to produce up to 90 tons of tissue paper per day. The rewinder was equipped with the trimming removal system.

Mr. Chusak Soysungvarn, Berli Jucker Cellox Co. Ltd's Prachinburi Plant Director, says: "It was difficult to put into words the happiness you get from seeing the first tissue reel came out from the A.Celli rewinder. We have focused heavily on this expansion project to enhance manufacturing efficiency, energy consumption and quality level to serve our customers in the best possible way. The machine definitely fulfilled our wishes and we were really satisfied by the excellent collaboration and services provided by the A.Celli team"

Berli Jucker Public Company Limited (BJC) is a company with more than 135 years of history at the forefront of the trade, manufacturing and service fields in Thailand. Originally, BJC engaged in rice milling, mining, timber, shipping, importing, and other activities that laid a foundation instrumental for Thailand's progress towards an "industrial" stage. After World War II, BJC diversified its operations into manufacturing, packaging and distribution.



A.Celli and Berli Jucker Cellox start-up team

SOUTH KOREA

Toscotec to supply a TT SYD Steel Yankee Dryer to Mirae Paper

Toscotec will supply a third-generation design TT SYD Steel Yankee Dryer to the South Korean tissue manufacturer Mirae Paper at their Jeonju paper mill. This is a repeat order from Mirae Paper who installed their first TT SYD on PM3 in 2013. The new steel Yankee will replace PM2's existing cast-iron cylinder and it is scheduled for start-up in the second half of 2022.

The third-generation design of TT SYD Steel Yankee Dryer benefits from an ideal ratio of the weight, width and pitch of the internal ribs and the optimization of the shell thickness. The scope of supply includes the condensate removal system and Toscotec's patented heads insulation for maximum thermal energy efficiency. The associated services include the complete project management, erection supervision, operation and maintenance training, commissioning and start- up assistance.

The TT SYD will be manufactured at Toscotec's fully integrated TT SYD Technology Center in Massa (Italy), situated just 3 kilometers away from seaport to ensure fast and safe shipping operations.

Yeong Rok Lee, Mirae Paper's Production Manager, says, "The steel Yankee on PM3 has been operating efficiently

for over 8 years, allowing us to reduce our thermal energy consumption by a significant amount. We expect the new Yankee on PM2 to be as reliable and to deliver even higher performances, considered the design upgrades that Toscotec has implemented on their TT SYD since our first installation. We consider the Yankee dryer to be the core component of our tissue machine's drying capacity. We chose the best technology available in the market, with all the technical support we need from an expert supplier."

Gabriele Martinelli, Toscotec's Sales Manager, says, "It is very rewarding that Mirae Paper has chosen Toscotec for the second time on their Yankee replacement. Toscotec strengthens its position in South Korea, where it is the only supplier of steel Yankee dryers, with 12 TT SYD sold in 9 years, including two installed on Toscotec's AHEAD tissue lines."

This order was obtained with the support of CleanTech Corporation, Yongin, South Korea.

Established in 2000, Mirae Paper operates one paper mill in Jeonju, South Korea. The company manufactures approximately 65,000 tpy of high-quality tissue, including toilet tissue, handkerchiefs, and towels, using recycled fibers. It distributes its products mainly to the Korean market.



Toscotec TT SYD Steel Yankee Dryer

Research and development, Manufacturing base of intelligent equipment for household paper— China Lucca-jiiangxi 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

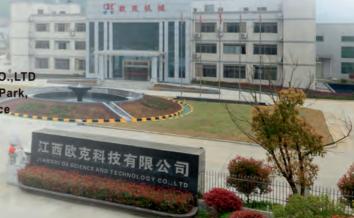
Finished roll tissue diameter: \$\phi70-150\$ mm



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GUATEMALA

GrandBay Papelera Internacional to increase tissue capacity

GrandBay Group placed an order with Toscotec for one AHEAD 2.2L complete tissue line to be installed at its subsidiary Papelera Internacional in Rio Hondo Zacapa, Guatemala. The start-up is scheduled for late 2022. The AHEAD 2.2L machine (PM7) has a sheet trim width of 5,500 mm, a design speed of 2,200 m/min, and an annual production capacity of over 60,000 tons. It features TT NextPress new generation shoe press, a third-generation design TT SYD with heads insulation patented system, and diesel oil-fired TT Hood-Duo system. The machine is designed to deliver the maximum possible drying efficiency with the lowest energy consumptions.

Alberto Matos, Project Engineering Manager at GrandBay Group, says, "We had a very positive experience with Toscotec's technology having had a TT SYD running for a few years now. We now have high expectations on the performance of their AHEAD tissue line, first and foremost in terms of energy efficiency. This project represents a milestone

of our growth strategy: we trust that Toscotec's expertise and state-of-the-art technology will enable us to achieve our targets."

Gabriele Romanini, Toscotec's Sales Manager, says, "We are pleased to partner with Papelera Internacional on this important project. This new AHEAD 2.2L line features Toscotec's most advanced technology. In particular, the combination of the shoe press with the steel Yankee guarantees a significant reduction in energy consumption and an improvement in tissue quality."

Papelera Internacional is part of the GrandBay Group, a leading Latin American company established in 1953, dedicated to the manufacturing, conversion and sales of personal care and home products of premium quality with presence in more than 25 countries in the Andean region, Central America and the Caribbean.



GrandBay Papelera Internacional, Rio Hondo Zacapa, Guatemala



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%.

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OPEAN ENERGY MARKETS HITTING BRICK WALL

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

Europe's energy crunch is continuing, as gas storage volumes are still hitting record low levels. A possible harsh winter could lead to severe energy shortages and possible shutdowns of large part of the economy. As the main discussion is focusing at present on a potential role of Russia in the current shortage, a new narrative could be soon hitting the news. In a surprise move the Dutch government has indicated that in a severe supply crunch situation the Groningen gas field, Europe's largest onshore gas reserves, could be partially and temporarily be reopened. It seems that the term Dutch Disease could get a new meaning, from being threat scenario of a rentier state situation to a show of Europe's and Dutch lack of realism in energy transition risks and market powers.

MET MAGAZINE



Political leaders, maybe not yet in Brussels, are also looking at the direct implications of higher energy bills or possible energy deficit for consumers and industry. Both could lead to severe protests or political landslides during upcoming elections. Threats of an energy poverty crisis are being discussed widely, but no real solutions except lower taxes are available. Due to higher energy costs, showing a possible record price level of \$100 MBTU or \$250 per crude oil barrel equivalent is putting fear in the eyes of politicians, especially in the Netherlands, Germany, France, and the UK.

Man-made disaster

The current situation however still does not make clear to politicians that the current crisis is a home-made issue, as the fundamentals have been changed by politics and EU, while market fundamentals are still not able to cope or counter threats. Even if Groningen is again pushing volumes into market, relieving maybe some of the pain in NL, UK or G-Fr-Belgium, the overall issue is still forgotten.

By opening up the gas market for liberalization, without presenting the real tools to parties, and pushing for a spot-market, instability has been introduced. Geopolitical powers are still at play, while utilities and European suppliers have been thrown into the seas full of sharks without some defense options. At the same time, when oil price-indexed longterm contracts with Russia were thrown out of the window, parties did not understand that this could mean handing over full market powers to national parties, such as Gazprom. Putin has been opening up his Russian champagne bottles, knowing that he was handed the key to European markets, with the option of manipulating fundamentals and prices at the same time. Europe also has blocked to find a strong strategy for EU parties to bring in new diversified other volumes.

At the same time, European leaders are in dire need to reconsider their diffuse position towards Russian gas supplies and the future role of NordStream 2, the new Russian-German gas pipeline addition, which is still being discussed and threatened by US sanctions and Eastern European opposition. It seems that Russia's leader Vladimir Putin however is holding the best deck of cards, as without additional and substantially more natural gas supplies to Europe, consumers and industry should be preparing for a possible cold winter. Europe's gas supply diversification has been a major disaster, not only due to inherent EU tactics and regulations. but also because of the ongoing onesided emphasis on energy transition, hydrocarbon divestment and full-scale investments in renewables, without realizing that the backbone of the European economic system is still hydrocarbon linked.

Hydrocarbon is the answer

The current situation shows one main fact of life, the success of the energy transition is not based on a one-sided approach, putting all eggs in one basket, while killing the other goose with the golden eggs. By introducing new renewable options, the market got destabilized, but politicians and others didn't want to admit the latter. Destabilization could and should be prevented, by acknowledging the fact that for the foreseeable future hydrocarbons, including coal, will be playing a major or even overwhelming role in the energy sector of the continent. At the same time, European politicians also should acknowledge that without hydrocarbons not only energy supply is being threatened, as renewables need to be backed up. but also the hydrocarbon economy is being hit substantially. Not yet fully understood by most, but without hydrocarbons, especially natural gas and oil, food and other primary sectors are being hit. The first shutdowns of fertilizer and steel companies have already been reported.

Brussels, London, Berlin and even The Hague, should start to change their approach to energy and the economy of the future. Politicians should start to listen to market analysts and geopolitical thinkers, that have been warning for the tectonic shifts being put in place, without realizing that this could lead to a major earthquake or tsunami. By opening up the energy markets the last decades, removing and believing in the power of the global energy market without realizing that hydrocarbon/ energy and geopolitics are sleeping in the same bed, risks have been taken that are now hitting us in the face.

At the same time, a clear strategy should have been shown indicating that while setting up a Green Deal and forcing energy transition, a hydrocarbon backbone should be in place, including investments in storage and new supply deals. Without the latter, supply giants such as Putin's Russia is holding all the cards. This winter could be wake-up call for most, especially voters. Energy transition is a long-term process, not a revolutionary approach. By throwing away the baby you have, while expecting the other come soon, miscalculations are now shown.

By opening up the gas market for liberalization, without presenting the real tools to parties, and pushing for a spot-market, instability has been introduced.

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ENERGY CRISIS
UNDERLINES THE
CHALLENGES TO
REACH NET ZERO



As the world prepares to discuss more aggressive cuts to carbon emissions at the UN's COP26 climate conference in Glasgow, China has just sent out the worst possible advance signal. It is going to loosen restrictions on coal mining in the final three months of the year in response to an energy crisis which has seen nationwide blackouts and many manufacturers shutting down production lines in recent weeks.

China will now extract more coal in 2021 than the 3.9 billion tonnes it extracted in 2020, as well as quietly importing more from places like Australia. The move flies in the face of President Xi Jinping's strong rhetoric about decarbonisation, including a very recent commitment to stop building coal-fired power stations in other countries. And it raises questions about the nation's ability to make good on the tough carbon reduction targets in its 14th five-year plan to 2025.

So how did China get into this situation, and what does it mean for the world's efforts to reach net zero?

Why the lights went off

China has a so-called dual control target for national environmental protection, which is about cutting both energy consumption and the amount of energy that goes into each unit of GDP (known as energy intensity). Having made impressive strides forward in the 2015-20 period, China is now aiming to cut energy intensity by 13.5% by 2025 and to cut carbon emissions per unit of GDP by 18%, with a view to bringing overall carbon emissions down by 2030.

To this end, China has been cracking down on coal, which still generates around two-thirds of its electricity. The state has been shutting down small and inefficient mines and putting restrictions on coal production. Consequently, coal output has been falling in many months in 2021, while coal imports were also low.

But this drove up the price of coal, and electricity-generating companies could not pass on the costs to consumers because of national price caps. Faced with generating electricity at a loss, major players have simply stopped producing.

To make matters worse, China has had an exceptionally hot summer (which itself is being blamed on climate change). The dry windless weather has meant that China's wind and hydroelectric power have been generating less electricity than usual. The result has been outages that have seen many families reduced to candle-lit dinners, traffic lights failing, and unlucky people getting trapped in elevators between two floors.

Meanwhile, provinces have been given specific targets and deadlines to help achieve the emissions targets, many of them related to electricity consumption. Beijing "name and shames" laggard provinces with yellow (bad) and red (very bad) alerts, represented by triangles in the map below.



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As with other hard targets in China, missing them can have serious implications for a local official's career prospects. So, in response to these alerts, several provinces have been imposing electricity usage restrictions, particularly on companies in energy-intensive industries like steel, printing, textiles, wood, chemicals, plastics and goods manufacturing. In many cases, companies were indiscriminately told to restrict production to two or three days a week –compounding the problems from generating companies shutting down power.

Coming at a time when demand for Chinese-made products has been rising sharply because global consumer spending is recovering from the pandemic, this is one more hit to global supply chains. They are already having to deal with too few semiconductors, workers, containers and ships – to name only a few. Apple, Tesla, Microsoft and Dell are among the big names saying their supply chains are now also being hit by China's energy crisis.

Not only is China loosening restrictions on coal production for the rest of 2021, it is making special bank loans available for mining companies and even allowing safety rules in mines to be relaxed. This is having the desired effect: on October 8, after a week in which the markets have been closed for a national holiday, domestic coal prices promptly dropped by 5%. This will presumably ease the crisis as the winter approaches, notwithstanding the government's embarrassment going into COP26.

So what lessons can be learned for the road ahead?

China is serious about decarbonisation

This article was published on www.theconversation.com



Transport of coal freight train at the station, Huaibei, anhui, China

1 Supply chains are fraying

Since the disruptions to global supply chains caused by COVID abated, the mood has been one of getting back to normal.

But China's power struggle illustrates how fragile they can still be. The three provinces of Guangdong, Jiangsu and Zhejiang are responsible for nearly 60% of China's US\$2.5 trillion (£1.8 trillion) exports. They are the nation's biggest electricity consumers and are being hardest hit by the outages. In other words, so long as China's economy (and by extension the global economy) is so dependent on coal-fired

power, there's a direct conflict between cutting carbon and keeping supply chains functioning. The net zero agenda makes it very likely we will see similar disruptions in future. The businesses that survive will be the ones that are prepared for this reality.

In China, the fixed electricity price cap prevented prices from rising even when it meant producing electricity at a loss. The power shortages have seen some big manufacturers surviving by hiring Command private generators (meaning more carbon emissions), while smaller economies have players who can't afford generators have been unable to fulfil orders drawbacks and are going bust. With large manufacturers looking to recoup the cost of hiring generators, and fewer goods being exported overall, global consumer prices will go up. Contrast this with a market economy like the UK, which is having its own energy crisis because of high gas prices. It too has consumer price caps for electricity, but it has been quicker to allow them to rise. This won't save many smaller energy providers, who have too many customers on unprofitable fixed-tariff contracts and don't own any of the energy network, so can't offset their losses by wholesaling energy to other providers at more expensive prices. Businesses and consumers are going to suffer too from higher energy bills, but there are no power cuts so overall the disruption to the economy is much less.

Despite its temporary climbdown over coal-mining, China's resolve over decarbonisation is worth commending. As pointed out by analysts at Nomura bank: "Beijing's unprecedented resolve ... could result in invaluable long-term gains, but the short-term costs to both the real economy and financial markets are substantial." In short, the world is facing a real crisis. The consequences from climate change are appearing more frequently

than before. Yet for all the exciting low-carbon technologies, we are still some way from being able to rely on them to cut carbon emissions without undermining the economy. The good news is that at least many countries including China are now committed to cutting emissions and are willing to collaborate to achieve this. Whatever the difficulties ahead, collaboration is surely the key to net zero.

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Are Africa and the Middle East tipping the balance of the Global Baby Diaper market?

In the changing global landscape of Baby Diapers, while the EU suffers from negative value growth and North America struggles with stagnation, Africa and the Middle East become critical areas of expansion.

This shouldn't take anyone by surprise. After all, the Baby Diaper market is, to a certain extent, positively correlated with population growth. On this note, Europe and the US are on the other side of the spectrum, as they collectively represent the largest Adult Inco market worldwide, with a combined share of 53.8%.

On the other hand, the world's fastestgrowing populations are in the Middle East and Africa[1]. By 2030 one in five people will be African[2] - two in five by 2050. In fact, birth rates are forecast to remain stable, if not increasing, in both regions[3].

In summary, the upside potential is much greater for these two areas, as average living standards have plenty of room for growth. As far as market penetration is concerned, most opportunities in Baby Diapers are in Africa and the Middle East, where affordability plays a major role.

Africa and Middle East: the latest figures

In the international panorama, Africa holds a unique position. A year-over-year population growth of 2.49%[4], a steady decline in the infant mortality rate(-2.6% from 2020)[5], a rising disposable income, an urbanization rate among the

fastest in the world[6] - all these factors bode very well for the region.

As regards the Middle East, thanks to the introduction of sanitation measures and modern medicine, the mortality rate has dropped dramatically. Income inequality between countries, largely due to the geography of oil ownership, is particularly high in the region and governments struggle to close the gap between the rich and poor providing essential necessities.

That said, Africa and Middle East countries are profoundly diverse. The regions are speckled by a myriad of ethnicities, cultures, religions and socio-economic realities. Indeed, a few countries hold the lion's share of areas GDP, while others follow from afar.

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	GDP per capita PPP (U.S. \$)			Population (mn units)		
	2014	2019	CAGR 14-19	2014	2019	CAGR 14-19
ETHIOPIA	1.514	2.320	+9%	98	112	+3%
KENYA	3.021	4.521	+8%	47	53	+2%
TURKEY	24.089	28.133	+3%	77	83	+2%
EGYPT	10.896	12.284	+2%	90	100	+2%
SOUTH AFRICA	12.521	13.034	+1%	55	59	+1%
NIGERIA	5.507	5.363	-1%	176	201	+3%
ALGERIA	13.003	12.020	-2%	39	43	+2%

GDP per capita PPP: https://data.worldbank.org/ Population: Department of Economic and Social Affairs (UN)

Inside Africa's and Middle East's Baby Diaper market

In the African Baby Diaper segment affordability is a huge and common factor, dominated by Baby Open format. While in some countries the traditional hourglass design originating from China is all the rage, the main trends are front and rear wings as well as product innovations, like core developments and anti-leakage features.

Compared to the continental average, East Africa, shows a better real GDP growth. Here multinationals are the trendsetter and local producers are following their footsteps, with imports from China, Turkey and the Far East trying to seize market share.

Product-wise, the premium segment is occupied by international brands, threatened by local producers targeting rural areas and smaller retailer channels with more affordable solutions. As a result, local players are slowly encroaching on multinationals' sales share. The landscape is even more complex if we consider that Chinese diapers are strengthening their presence, mainly due to powerful distribution networks.

South Africa is the top African country in terms of Baby Diaper's penetration. Despite the increasing unemployment rate, it ranks first in the continent by GDP. Indeed, the high disposable income is a magnet for established brands, that have invested a huge amount of capital over the years. In addition, the low per capita utilization makes South Africa an ideal market for those global players who want to secure their future growth.

Speaking of the Middle East, many Disposable Hygiene companies have two or three different product lines, so as to cater to a wide array of customers of every budget. Product-wise, Baby Open, as in Africa, is the most common item in terms of volumes in the whole Middle East, where the most part of manufacturers choose this format to enter the market.

Egypt is 40 in the IMF's list of countries by nominal GDP. The reason for this staggering success is largely due to the macroeconomic stabilization program, reduced debt to GDP ratio and a solid primary budget surplus. In light of this, Egypt is already home to several international brands and, thanks to its close relationship with Turkey, benefits from a positive outlook in the landscape of the African Baby Diaper market.

Among the Middle Eastern countries, Turkey has a special role to play, being in close, lucrative relationship with both Nigeria and Egypt. The economic downturn still represents a slowdown for the region, marginally limiting purchasing power.

Premiumization is certainly a factor. Indeed, the defining feature for Turkey is its tendency to closely look at European trends. However, all that glitters is not gold, given that, with no positive signs pointing to a recovery for the economy, the slowdown in per capita volume consumption growth is set to continue, suggesting that affordability and value for money are bound to be a relevant factor for many years to come.



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Product-market fit: the positioning of B6-W Red in Africa's and Middle East's Baby Diaper market

For manufacturers looking to get the best out of the African and Middle Eastern markets, B6-W Red represents an enticing opportunity.

Thanks to the process solutions proven on GDM best-selling lines, B6-W Red, running at 600ppm, ensures high reliability with stable performances and no stops.

The machine delivers baby diapers with cutting edge core technology and the option for permanent channels. Moreover, it enables an optimal mix and distribution of fluff and SAP while minimizing raw material costs thanks to Zero Waste design on both front & rear wings and the capability to run low gsm textures.

Not enough? With B6-W Red solution you can take advantage of all the benefits of a single source supplier from converting to primary packaging, as GDM Business Made Easy concept drives our business model: check out the matching SB50 Red or SB50 GO stacker and baggers lines.

Conclusion

The African and Middle East markets are wildly diverse and, at the same time, extremely promising. These two areas have all the characteristics that make for a great Baby Diaper market: strong population growth, rising living standards, improving disposable income. Combined with an improving consumer awareness, it makes the case for a growing African and Middle Eastern Baby Diaper market.



- ¹ Callum Brodie, (2018, May 3). The world's fastest-growing populations are in the Middle East and Africa. Here's why. World Economic Forum. https://www.weforum.org/agenda/2018/05/why-the-world-s-fastest-growing-populations-are-in-the-middle-east-and-africa/
- ² John McKenna, (2017, May 2). 6 numbers that prove the future is African. https://www.weforum.org/agenda/2017/05/africa-is-rising-and-here-are-the-numbers-to-prove-it/
- 3 The Middle East Population 2021. World Population Review. https://worldpopulationreview.com/continents/the-middle-east-population
- 4 Africa Demographics. worldometer. https://www.worldometers.info/demographics/demographics-of-africa/
- ⁵ Africa Infant Mortality Rate 1950-2021. Macrotrends. https://www.macrotrends.net/countries/AFR/africa/infant-mortality-rate
- ⁶ David Kanos and Chris HeitzigThursday, (2020, July 16). Brookings. https://www.brookings.edu/blog/africa-infocus/2020/07/16/figures-of-the-week-africas-urbanization-dynamics/

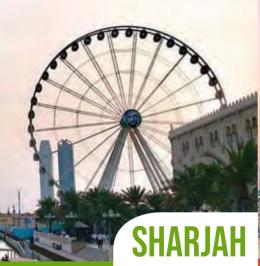
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UNITED ARAB EMIRATES

7-8-9 March 2022

Paper One Show brings together the manufacturers, distributors and buyers from all ovver the world in the 7th edition of the Paper One Show for the first time after the pandemic in UAE.



EXHIBITION Expo Centre Sharjah 7-8-9 MARCH



B2B MEETINGS Gala Dinner Expo 2020 Dubai Visit 8 MARCH (Evening)



Paper Mill Visit State of the Art Tech. Presentation 9 MARCH (Evening)



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The **7**th edition of the premier international paper exhibition in the MENA region!



THE QUALITIES OF A.CELLI'S E-WIND® AC ZERO NONWOVEN MASTER ROLL WINDER

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The winding and rewinding of nonwoven fabric are processes that require machinery capable of preserving its qualities and, especially in the case of products intended for the hygiene market, avoiding any type of contamination.

Spunbond, for example, is a material used in many hygienic applications, such as diapers and sanitary napkins, and it is therefore imperative to avoid, during its processing, both any direct human contact with the material and contamination by oil, grease and dust.

The formation process of spunbond nonwoven involves the laying of a layer formed primarily of polypropylene, as well as other materials, which is subsequently cohesionated using a calender capable of applying pressure and heat to the web.

This production process can reach very high speeds and, at the same time, very low basis weights. The combination of these two characteristics can give rise to a considerable waste of material during the doffing phase, in relation to the time required to complete the operation.

To overcome these critical issues, A.Celli has developed the E-WIND® AC Zero winder: a solution capable of guaranteeing high productivity and winding quality of the TNT Spunbond master roll, eliminating both material waste and contamination by external agents.

The features of the E-WIND® AC Zero winder

AC Zero is our top of the range axial-peripheral winder for nonwoven mother rolls. Thanks to the maximum operating speed of 1400 m/min it is in fact the ideal solution for large-scale spunbond and high-loft production. With a view to maximizing productivity by reducing the number of web doffings required, AC Zero is able to process master rolls with diameters up to 3.5 meters, maximum width of 5800 mm and basis weights from 8 to 70 gsm.

In addition, our winder provides for the automatic roll doffing, paper strip cross cutting, automatic drawing in of the product with the aid of air blowsand the use of tungsten carbide drum rolls. The tension control in closed loop is carried out thanks to the adjustment of the speed of the drive drum, while the value of the input tension is read by the load cells installed at the start of the winder.

The engines present are the following:

- Paper roll and bowed roll
- · Drive drum
- · Axial helper on the doffing arm
- · Axial helper on the side

E-WIND® AC Zero: zero waste and contamination

The E-WIND® AC Zero winder, to guarantee the desired winding quality level, provides for the automatic control of the TNT - Torque, Nip and Tension - parameters with automatic reduction according to the roll diameter (taper function) during the entire process, including the web doffing phase.

This last phase is in fact particularly critical as regards the production of waste material, which is influenced by variables such as the number of web doffing required in a given period of time, the speed of the line and the time required for the actual doffing.

Thanks to the automatic controls carried out by our AC Zero winder and the continuous contact between the reel and the drive drum, we are able to guarantee the perfect winding of every single meter of product, while eliminating the production of nonwoven material waste.

However, this is not the only strong point of our winder. A.Celli E-WIND® AC Zero is also the only winder on the market that guarantees the absence of contamination of the nonwoven web by dust, grease or oil.

To achieve this goal AC Zero makes use of various solutions, such as the use of dust covers, self-lubricating shaft bearings without the need for further maintenance, pneumatic pistons and optimized oil passage paths to avoid oil contamination of the processed nonwoven material.

Available options

The E-WIND® AC Zero is available with various options and customizations, as are most of the A.Celli winders and rewinders. In fact, it is possible to provide an integrated master roll storage station, as well as a weighing system and an automatic label applicator. There is also shaft and master roll handing system and a dedicated package for high-loft nonwoven products.

A.Celli product range: excellence in nonwoven winding

The A.Celli group is present in the global nonwoven, paper and tissue market with high quality products and technological solutions since 1944: we proudly manufacture the best winders, unwinders and rewinders on the market.

If you want to learn more and learn about our entire product range, download the free eBook "A.Celli E-WIND®: the best winders and rewinders for nonwoven, tissue and paper".

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AMOTEK

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.

Can you please tell us more about Amotek's behind the scenes?

Massimo Zanotti: Yes, sure, it is a pleasure for me to introduce our team. Since the beginning, Amotek employees have always been the real engine of the company itself. We can boast of committed, experienced individuals as well as young and dynamic people who contribute every day to answer our partners' needs by finding tailored packaging solutions. Thanks to this, in our 44 years of history, we have consistently been able to deliver well-performing and reliable machinery to the tissue industry.

What is the recipe for Amotek's success?

Michele Mike 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?

Massimo 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?

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

Massimo 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 use of IoT for proactive and immediate maintenance and service.

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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.



PB192 packaging execution



IS220 packaging execution



Facial tissue



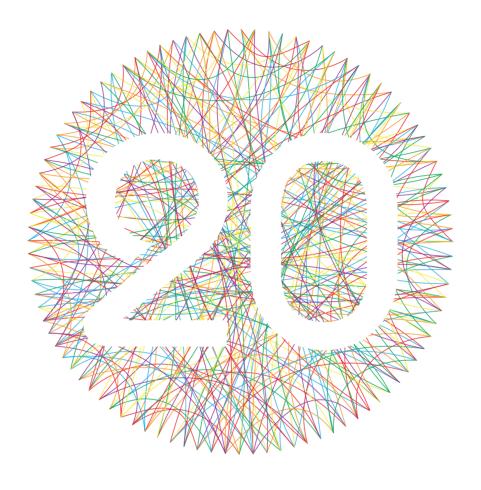
Would you like to add something regarding Amotek attendance to the coming shows?

Michele Mike 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!

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Where nonwoven innovations happen





19 - 22 October 2021 Palexpo, Geneva





THE ANSWER TO YOUR NEEDS

WITH OUR INNOVATION



FLEXIBILITY IN ACTION

IS220 Multi-Bagger Series

- ✓ Extreme flexibility in format and presentation range
- ✓ Modular infeed concept for high layout versatility
- ✓ Single and Multiple layer
- ✓ Easy pack execution with thin products

And many other features for an innovative machine! **Be smart, choose Amotek!**

Meet us at

MIAC

BOOTH #122

13 - 15 October

19 - 22 October

More Information: www.amotek.com

OPTIMA



B6-W Red. Boost your sales while we mind your production

Thanks to the process solutions **proven** on our best-selling B8-W Red, this machine delivers baby diapers with **cutting edge core technology** and the option for permanent channels. It enables an optimal mix and distribution of fluff and SAP while **minimizing raw material costs** thanks to Zero Waste on both front and rear wings and the capability to run low gsm raw material.

B6-W Red, running at an actual speed of **600 ppm**, is designed to last and ensures **high reliability** with **stable performances** and **no stops**. It is the answer to your needs of **maximized production** at an **optimized cost** supporting you and your growth ambitions in the Baby Diaper market.

Take advantage of all the benefits of a **single source supplier** from converting to primary packaging, combining it with our **stacker & bagger SB50 Go**.





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