PRESSBOOK

What we do
Efficent technologies in tissue making

EDITION N.4

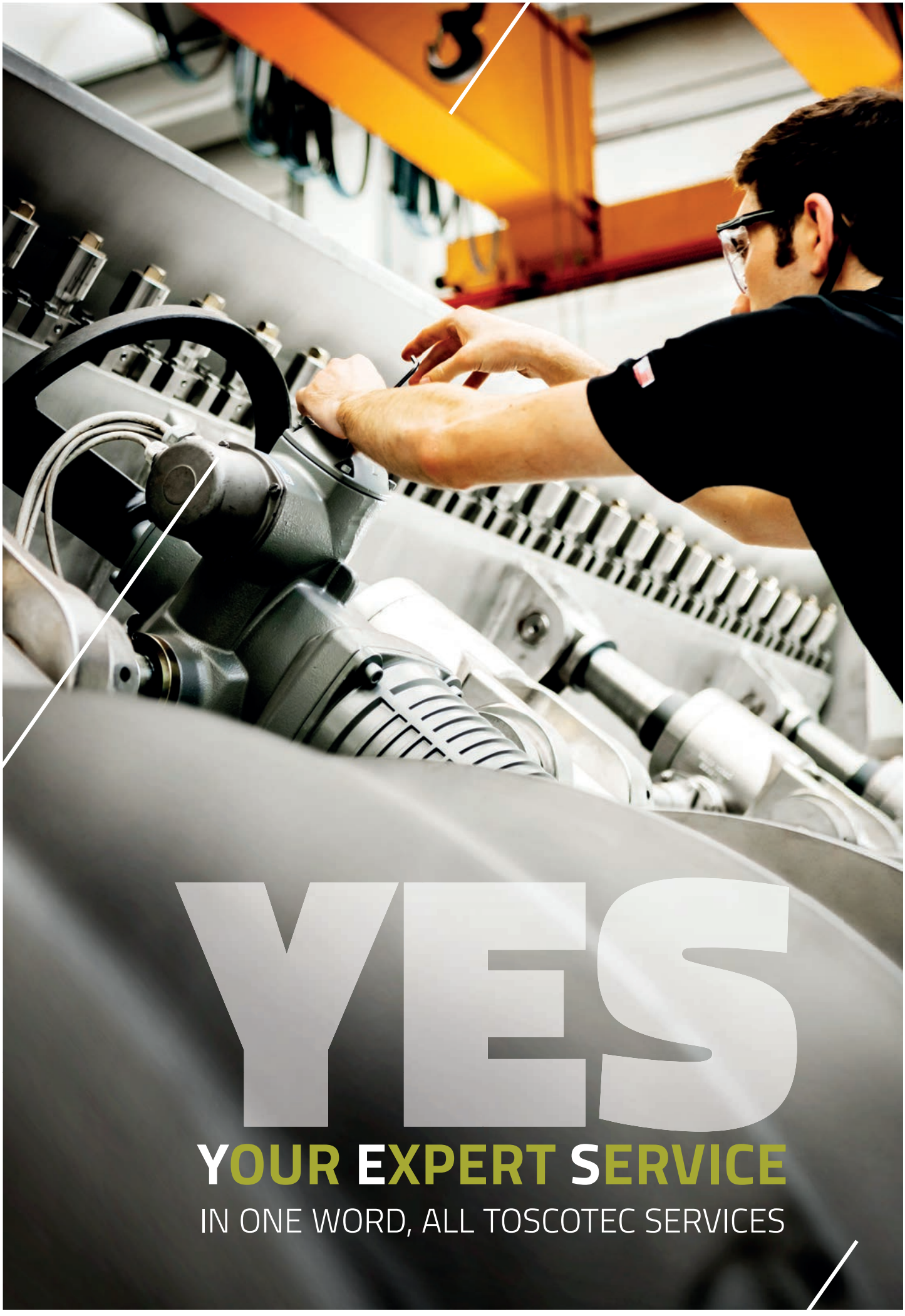
TOSCOTEC

PRESSBOOK

EDITION N.4


TOSCOTEC

CONTENT



YES

YOUR EXPERT SERVICE

IN ONE WORD, ALL TOSCOTEC SERVICES

YES

YOUR EXPERT SERVICE

IN ONE WORD, ALL TOSCOTEC SERVICES.

YES the Toscotec division created to follow customers' demands on a daily basis, offering them remote and on-site assistance for all maintenance needs and good operation of their plants.
Our team of specialized professionals offers a range of customized services, in order to guarantee the best overall efficiency of the plant over time.

YES

YOUR EXPERT SERVICE

YES - YANKEE DRYERS
YES - PAPER MAKING
YES - HANDLING
YES - BURNERS
YES - YANKEE HOOD & AIR SYSTEM
YES - STEAM
YES - HEADBOX
YES - PRESS ROLLS LINEAR LOAD
YES -24
YES - CONNECT-VISION
YES - PLANT OPTIMIZATION
YES - GENERAL MAINTENANCE

PRESS RELEASE | 6TH SEPTEMBER 2016

TEN TOSCOTEC TISSUE MACHINES UP AND RUNNING AT VINDA'S

SANJIANG MILL IN GUANGDONG, (CHINA).

Vinda Paper (China) Co., Ltd. in Sanjiang mill, Jiangmen, has started up two new Toscotec's machines, TM 9 & 10. Both machines are AHEAD-2.0M with a design speed of 1,800 mpm.

TM10 is the 21st machine supplied by Toscotec to Vinda.

Vinda's Sanjiang mill in Guangdong province has now ten Toscotec tissue machines of different models and configurations. Considering the start-ups of TM9 and TM10, the Chinese producer has achieved startup of all 10 machines in less than four years. This is a testament to the outstanding growth and sustained progress of the Vinda Group, and to Toscotec's strategic development of customized design and state-of-the-art solutions for energy reduction.

Furthermore, on June 20, Vinda Paper (Shandong) Co., Ltd. fired up one AHEAD-1.5M ES tissue machine, which is already running at the speed of 1,500 mpm. The machine, which is

the fourth installed in the Shandong mill, has a design speed of 1,700 mpm and a net web width of 3,400 mm. The AHEAD-1.5M tissue machine installs Toscotec's second generation Steel Yankee Dryer TT SYD, steam-heated hoods and large suction press roll (with a diameter of 1425 mm). Based on the remarkable results of previous projects, Vinda Group has once again chosen to invest in Toscotec's tissue machine technology, which benefits from a comprehensive energy-saving concept, the TT DOES (Drying Optimization for Energy Saving) package.

A part from TM4, Vinda's Shandong mill hosts other three Toscotec-supplied machines: TM1 & 2 are AHEAD-1.5S ES, steadily running at 1500 m/min and TM3, identical to TM4, started-up last November, is now running at 1,600 mpm.

Vinda Group's production capacity has reached over 1 million t/y now.

PRESS RELEASE | 13TH SEPTEMBER 2016

SONOCO ALCORE REVAMPS DRYER SECTION

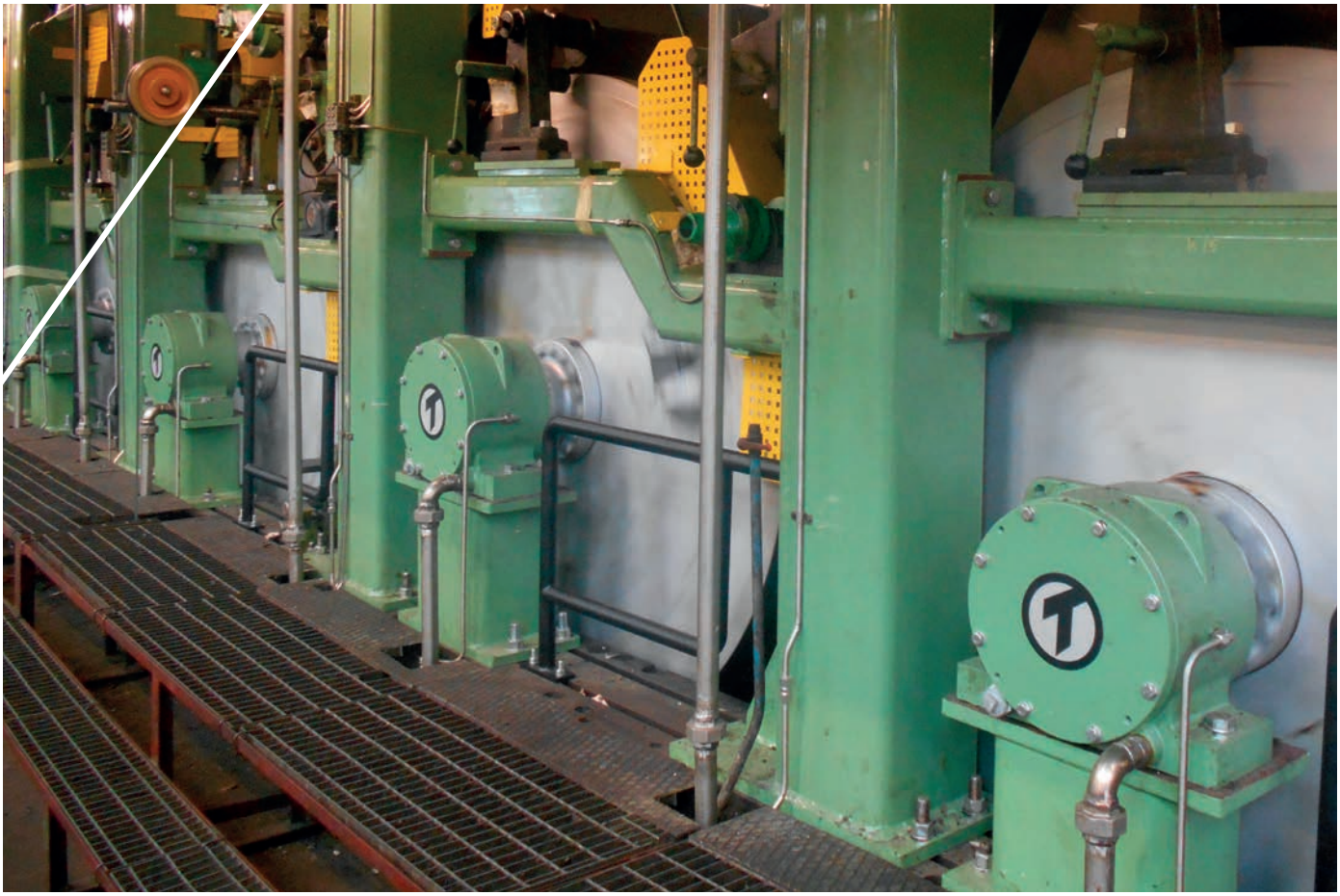
WITH ADVANCED TT STEELDRYERS IN CIRIÈ PLANT, ITALY.

Toscotec dryer section rebuilt has been successfully started-up at Sonoco Alcore paper mill in Ciriè–Torino, Italy.

The PM1 in Ciriè is specialized for the production of high quality core board grades.

The goal of investment was principally to increase the production, optimizing both efficiency and dryer section runnability by rebuilding of several dryer groups. A total of 15 new TT SteelDryer in place of casted iron dryers has been provided, together with the modernization of mechanical drive and tail threading implementation.

The specific design of TT SteelDryer with flat heads welded to the shell allows to produce a wider and uniformly dried-out sheet. Toscotec was the first to introduce the revolutionary concept of steel dryers in



the paper industry. Today it boasts an undisputed leadership with more than 1200 installed units worldwide.

On completion a new mist removal device has been supplied in the forming section, in order to increase the wet section cleaning and efficiency.

The expected shut-down time was respected and productivity targets were immediately achieved after the start-up.


YES
YOUR EXPERT SERVICE
YES
YOUR EXPERT SERVICE

YES
YOUR EXPERT SERVICE

YES YANKEE DRYERS

The Toscotec INFINITELife Service for Steel Yankee Dryers offers wide-ranging services and tools, aimed to check the Yankee's run-ability and performance.

LEAD FEATURE

GROUNDBREAKING TISSUE-MAKING INVESTMENT BREAKS GROUND.

Little did Premier Paper know that when it established the first-ever paper machine manufacturing facility in South Africa in 1920 that the same site, then making predominantly ticker tape, would be home to larger tissue production facility in sub-Saharan Africa just under a century later.

Located 30km south of Johannesburg, Kliprivier site has reached yet another milestone in its 96-year history. "The Twinsaver Group's R500 million installation of PM5 will be a paradigm shift' for the Group in terms of safety, environment, quality, energy efficiency, innovation and technology", said Anthony Hulme, General Manager for the Inland Operations.

On Friday 7 October, seated in what is to become the stock preparation plant of PM5, key stakeholders, employees, project partners and invited guests were witness to 'groundbreaking' sod-turning ceremony. Construction of new facilities and installation of the new tissue-manufacturing machine has now commenced, with completion planned for November 2016. It will enable an annual output of more than 27,000 tonnes.

In addition to Kliprivier PM5, Twinsaver has committed to the installation of an R80 million two-ply converting line at its Bellville factory in the Western Cape. The PCMC Forte machine was commissioned and officially opened in September 2016, will double production capacity and create additional employment across the tissue value chain.

Visibly proud of the Twinsaver's achievements, Garth Towell, Group

CEO, said, "The PM5 investment will take our installed tissue-making capacity to over 80,000 tonnes – the largest on the African continent! This is both exciting and inspiring for the team, the Group, Ekurhuleni and indeed South Africa".

With the manufacturing industry contributing 14% of the country's Gross Domestic Product, it is a key economic driver, significant employer, trade player and investment generator. "It is also cited as one of the country's top three multiplier growth sectors", said Towell.

These investments are consistent with the National Development Plan 2030 vision of diversification, employment creation and domestic growth, he noted.

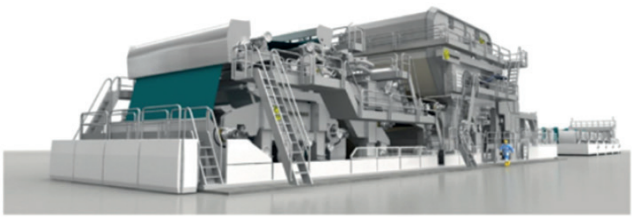
Executive Mayor of Ekurhuleni Clr Mzwandile Masina promoted the city as "a region that is fast becoming the preferred destination for investment, staying, working and playing". He congratulated Twinsaver for its decision to invest here, noting that it is both a vote of confidence and big endorsement of the municipality's programme to attract investment.

In the context of the city's mining roots and the in-migration of people seeking greener pastures, Clr Masina said, "This trend has continued over the years as Ekurhuleni migrated from mining to becoming the manufacturing capital of the southern hemisphere".

The municipality has founded various initiatives including 'City Meets Business' - a monthly information sharing forum, Township Enterprise Hubs, the Ekurhuleni Investment Centre in Kempton Park which serves as a one-stop point to fast-track investment and development applications, as well as the Aerotropolis which has "ignited a new wave of investments in and around the airport catchment area".

The investment centre has registered 12 large-scale projects collectively "valued at billions of rands" and which have the potential to address the unemployment challenges facing the city.

Clr Masina noted that the population has rocketed from two million to three million in 15 years. "A total of 65% of our people are below the age of 34, and although this distribution could be an advantage due to longevity



and youthful exuberance, the reality we face is contrary. Only 15% of the Ekurhuleni population have post-matric qualifications while 4% have no schooling at all". He cited that 3% have primary schooling, 35% at secondary level and paltry 35% possess matric certificates while the region's unemployment rate is 28%.

Speaking at the Bellville unveiling in August, Towell, said, "A key element of our strategic plan is enhancing manufacturing capability and productivity in creating sustainable value for the business' stakeholders. By investing in the best manufacturing technologies available and up-skilling our employees, we are entrenching our position as the leading tissue producer in South Africa and sub-Saharan Africa".

According to Towell, sub-Saharan Africa's manufacturing sector, which brought in over $157 billion in 2014 (equivalent to 45% of SA's GDP in the same year), has doubled production over the past 10 years. "What this shows is the immense potential for the region to become a strategic manufacturing hub and modern manufacturing technologies and the advancement of skills are crucial to realising this potential".

"Through our continued investments, we look forward to sustaining our number one sector position and expanding our footprint across other African markets".

Talking technical

Leading contractor Toscotec, along with Arup, will oversee the turnkey delivery of the new TM5, which will comprise stock preparation systems for virgin pulp, a tissue machine encompassing the latest dry crepe tissue technology, as well as plant auxiliaries, electrification and control systems.

The new PM5 will be capable of operating speeds of up to 1800 m/min, producing tissue rolls of appropriate strength, bulk and softness – key consumer attributes – and at the most efficient levels of utility consumption.

"The greenfield project will be focused on energy savings and low emission concepts with a great attention to the environmental and sustainability issues as well as to the impact on the site", explains Davide Mainardi, sales and customer care director for Toscotec.

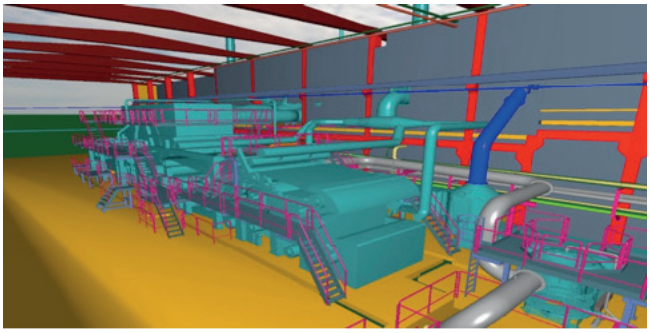
The energy efficiencies (versus current operations) are between 15-20%. "This is significant given South Africa's current utility struggles", noted Hulme.

According to Hulme, PM5 will deliver optimum flexibility by producing tissue for conversion into toilet rolls, facial tissue and industrial wipes off the same line.

Save the date – November 2017

In his concluding remarks, Towell issued a call to action to Operations Director Sean Nieuwenhuys, Kliprivier GM Tony Hulme, Project Manager Peter Hartley and the Kliprivier team: “Maintain safety standards at all times - zero injuries. The project must be completed within budget and on-time. Start-up will be November 2017".

Towell added that he expects continuous operation of PM3 through this project through the achievement of targets - and no excuses".



NOW YOU KNOW

Ticker tape was the earliest digital electronic communications medium, transmitting stock price information over telegraphlines, in use between around 1870 through 1970. It consisted of a paper strip that ran through a machine called a stock ticker, which printed abbreviated company names as alphabetic symbols followed by numeric stock transaction price and volume information. The term "ticker" came from the sound made by the machine as it printed. Paper ticker tape became obsolete in the 1960s, as television and computers were increasingly used to transmit financial information. The concept of the stock ticker lives on, however, in the scrolling electronic tickers seen on brokerage walls and on financial television networks. Source: Wikipedia.com

MILESTONES

1920	Premier Paper establishes first paper machine – PM1 – in South Africa on the Kliprivier site.
1929 and **1939**	Changes in Premier Paper ownership to Northern African Finance Corporation.
1948	Premier Paper install second paper machine PM2 at Kliprivier. Yankee Cylinder for PM2 made its way by sea from the UK to Cape Town and then up to Johannesburg.
1980	Nampak Ltd acquire 51% stake in Premier Paper Mills.
1983	Nampak Ltd acquires 100% stake Premier Paper Mills.
1991	PM3 tissue machine commissioned.
1993	PM1 and PM2 decommissioned.
1995	Nampak tissue and paper divisions merged.
2000	Sancella Diaper Factory established on site.
2010	PM3 Tissue Machine upgrade to virgin fibre stock preparation plant and crescent former technology.
2015	Nampak Tissue acquired by Ethos Private Equity Group - Twinsaver Group established. Sancella business acquired by Lodestone and assets relocated.
2016	Kliprivier celebrates 25 years since PM3 tissue production was commissioned.
2017	PM5 tissue machine approved and installation commences.

PRESS RELEASE | 15TH SEPTEMBER 2016

THE LARGEST TT SYD EVER INSTALLED IN EUROPE

SUCCESSFULLY STARTED UP AT WEPA CASSINO TISSUE PLANT, ITALY.

The biggest European Steel Yankee Dryer for tissue production, a Toscotec TT SYD-18FT (5600mm wide), has been successfully started up at WEPA Cassino mill in Italy. The PM3 rebuilding project was commissioned to Toscotec, WEPA's long-term partner, continuing the process of investments in order to upgrade the plant and to achieve the best available technology in tissue making.

"High quality of product and energy saving were at the base of the project. WEPA is going to get more and more relevance in the European market. Cost Leadership and attention to consumers and customer needs, as well as sustainability in company management and production, is part of WEPA´s future strategy". - says Bernhard Gross, Managing Director of WEPA Italia srl. "To avail ourselves of a skilled machinery specialist like Toscotec has been a big step forward to realize our strategy".

The scope of the supply included also a double layer fully hydraulic TT Headbox-MLT with polished pipes and a Yankee steam & condensate removal system. All equipment was provided on a turn-key basis including engineering, supervision and installation.


TOSCOTEC


YES
YOUR EXPERT SERVICE
YES
YOUR EXPERT SERVICE

YES
YOUR EXPERT SERVICE

YES PAPER MAKING

Toscotec believes that providing its customers with the best service for process upgrading and stability is key to improve the machine run-ability and the O.E.E.

PRESS RELEASE | 8TH NOVEMBER 2016

TWINSAVER GROUP IS SET TO BECOME THE LARGEST TISSUE MANUFACTURER

IN SUB-SAHARAN AFRICA THROUGH THE INSTALLATION OF A NEW TOSCOTEC AHEAD-2.0S TISSUE PRODUCTION LINE.

Twinsaver Group, the major manufacturer of tissue products in South Africa, announced that they will proceed with a R500 million investment in the country's local manufacturing sector by investing in a state-of-the-art new plant at its Kliprivier operations site in Gauteng, South Africa. The line, supplied by Toscotec, will be started-up in the last quarter of 2017.

Twinsaver Group is mainly focused on a sustainable business and it is a branded organization with innovation and consumers' needs in the center of the growth strategies. By investing in new capacity, Twinsaver has chosen Toscotec AHEAD tissue line to improve the production and keep the leadership in the market.

The company ground-breaking ceremony took place in Kliprivier manufacturing site on 7th October 2016 at the presence of the major country authorities.

The turn-key delivery for the new TM#5 will include a stock preparation system for virgin pulp, an AHEAD-2.0S tissue machine, tissue machine and plant auxiliaries, electrification & control systems. Full engineering, erection, erection supervision, training, start-up and commissioning complete Toscotec scope of supply.

The tissue machine will have a width of 2.75 m and will be designed for 2,000 mpm speed. The new line will produce, among the other grades, high-quality super-soft toilet tissue. The greenfield project will be focused on energy savings and low emission concepts with a great attention to the environment.

PRESS RELEASE | 6TH DECEMBER 2016

TOSCOTEC TO REBUILD PM1 TISSUE MACHINE AT CORRELL TISSUE, SOUTH AFRICA.

Toscotec has been awarded a contract to rebuild PM1 at Correll Tissue, in Durban, South Africa. The start-up of the rebuilt machine is scheduled for the second half of 2017.

Toscotec has been awarded a contract to rebuild PM1 at Correll Tissue, in Durban, South Africa. The start-up of the rebuilt machine is scheduled for the second half of 2017.

Correll Tissue is the primary tissue paper manufacturing plant of Novus Holdings, one of the most technologically advanced print manufacturing operations in Africa. The plant, located in Phoenix Industrial Park, harnesses the potential of waste paper, produced by the extensive printing operations of the Group, to make domestic tissue paper. With the plant's sufficient converting capacity, investment in recycling processes has been made which sees a large quantity of the plant's water requirements being reprocessed.

The scope of supply will include a major rebuild of the existing fourdrinier tissue machine into a MODULO crescent former with a new TT Headbox-SLT. The delivery also includes a rebuilding of the existing approach flow system and the felt run, as well as the YD doctoring system.

Electrification and control system for the new parts, erection supervision, start-up assistance and training will complete the Toscotec's package. The new machine parts will be designed for a future speed of 1000 mpm with a reel width of 2460 mm.

"Partnering with a credible supplier on this project is of key importance and we are confident in the service Toscotec provides. We look forward to achieving great results on the rebuild" says Conrad Rademeyer, Group Executive: Coldset and Tissue at Novus Holdings.

Toscotec has previously supplied Correll Tissue with another key component: the TT SYD in 2006.

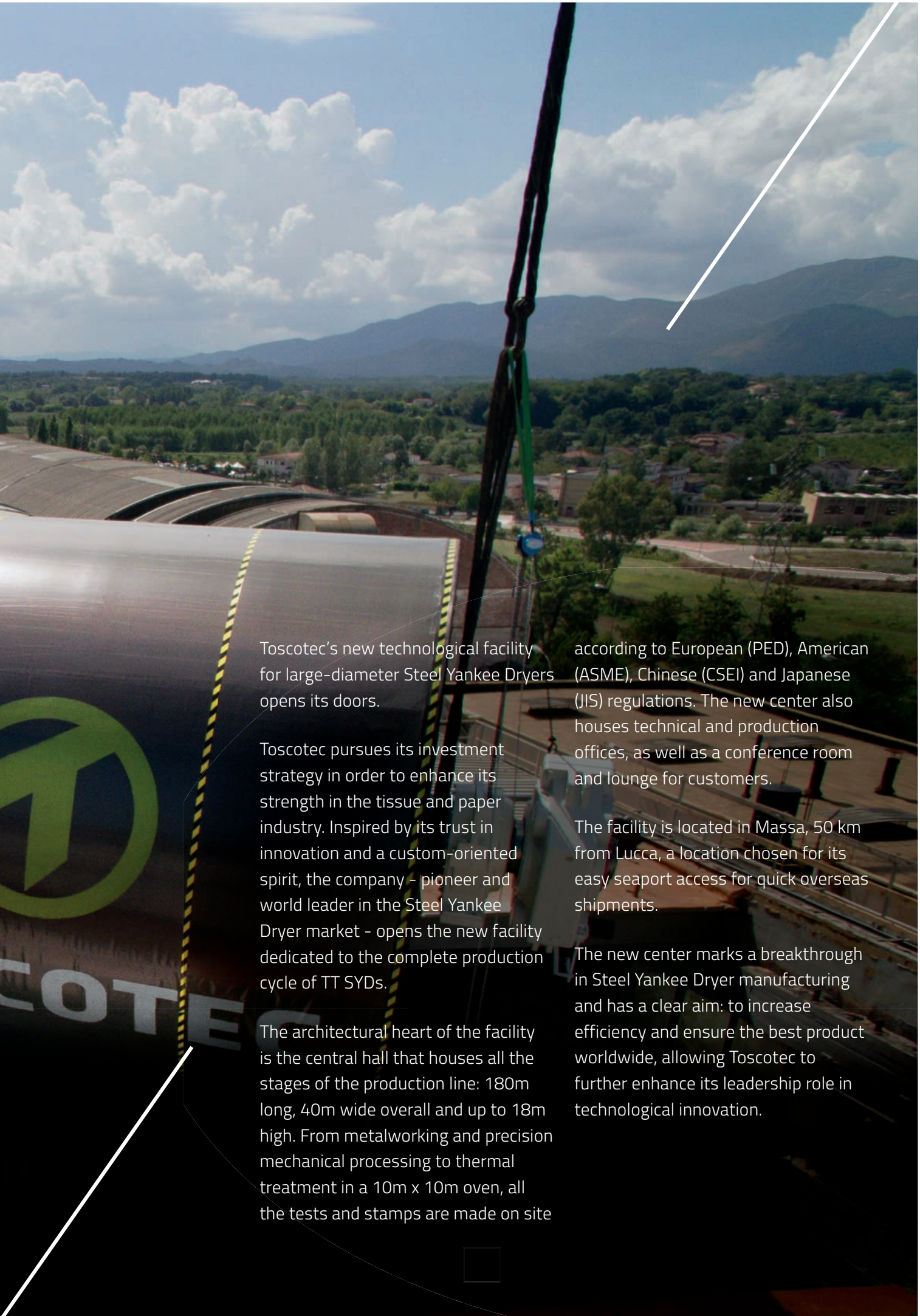
This new project consolidates Toscotec's capabilities to provide, not only a wide range of new machinery but also complex rebuild projects based on turn-key concept.

correll

A Novus Holdings company

PRESS RELEASE | 4TH OCTOBER 2016

TOSCOTEC'S NEW TECHNOLOGICAL FACILITY FOR LARGE-DIAMETER STEEL YANKEE DRYERS OPENS ITS DOORS.



Toscotec's new technological facility for large-diameter Steel Yankee Dryers opens its doors.

Toscotec pursues its investment strategy in order to enhance its strength in the tissue and paper industry. Inspired by its trust in innovation and a custom-oriented spirit, the company - pioneer and world leader in the Steel Yankee Dryer market - opens the new facility dedicated to the complete production cycle of TT SYDs.

The architectural heart of the facility is the central hall that houses all the stages of the production line: 180m long, 40m wide overall and up to 18m high. From metalworking and precision mechanical processing to thermal treatment in a 10m x 10m oven, all the tests and stamps are made on site according to European (PED), American (ASME), Chinese (CSEI) and Japanese (JIS) regulations. The new center also houses technical and production offices, as well as a conference room and lounge for customers.

The facility is located in Massa, 50 km from Lucca, a location chosen for its easy seaport access for quick overseas shipments.

The new center marks a breakthrough in Steel Yankee Dryer manufacturing and has a clear aim: to increase efficiency and ensure the best product worldwide, allowing Toscotec to further enhance its leadership role in technological innovation.

PRESS RELEASE | 29TH SEPTEMBER 2016

TOSCOTEC ACHIEVES A NEW RECORD FOR STEEL YANKEE

WIDTH IN REBUILDING PROJECT AT ST TISSUE.

Toscotec has been chosen to supply ST Tissue in Franklin, Virginia, with the widest Steel Yankee ever to be manufactured. ST Tissue F-5 machine will be converted to produce bathroom tissue and kitchen towel.

The market leader in Steel Yankee Technology, Toscotec will rebuild the dry-end section and redesign the F-5 machine to convert it to dry crepe tissue.

The current paper machine configuration, consisting in a forming section, nip-press section, dryers section and Reel drum, will be converted to dry crepe tissue machine keeping the existing fourdrinier and redesigning the nip-press section to felt run arrangement which includes new Toscotec dry end equipment. Toscotec scope of supply includes TT SuctionPressRoll-SPR1045, an under machine broke pulper TT MachineBrokePulper-MBP75, and a TT SYD-12FT x 257" face width (6530 mm), the widest Steel Yankee Dryer ever manufactured.

The TT SYD-12FT, second generation rib design, fits the customer needs thanks to the high drying capacity performance and energy saving concept which includes Toscotec's Patented Head Insulation.

All the existing drying drums will be removed, and a new Toscotec tail feeding system will be provided and installed between the Toscotec Steel Yankee and the existing pope reel.

Erection supervision, commissioning and start up will be performed by Toscotec Service Team.

The PM5 conversion is part of a plan of investments that ST tissue has decided to implement with the aim to follow the market's demand.

PRESS RELEASE | 20TH DECEMBER 2016

TOSCOTEC TO SUPPLY TWO MODULO-PLUS

ES TISSUE MACHINES TO HENGAN GROUP.

Hengan Group, a leading Chinese manufacturer of tissue and hygiene products, has ordered two Toscotec's MODULO-PLUS ES tissue machines, to be installed at its Changji mil in Xinjiang Autonomous Region.

These MODULO-PLUS ES are the first two tissue machines supplied by Toscotec to Hengan Group. They have a production speed of 1,600 m/min and a net sheet width of 2.8 m. They are equipped with TT Headbox SL-T full hydraulic single layer headbox, TT SuctionPressRoll-SPR1200 big diameter suction press roll, TT SYD-12FT 2°GENERATION steel yankee with optimized rib design, TT Milltech high efficiency natural gas heated hybrid hood, Steam and Condensate System. The scope of supply also includes complete control system and electrical plant MSC,DCS and Drive system, as well as erection supervision, commissioning, start up assistance and training programs.

Hengan Group has favored the advantages of Toscotec's well known TT DOES (Drying Optimization for Energy Saving) solution at the dry end, as well as the latest design at wet end including headbox, which ensures the highest drying capacity at the lowest energy cost for the mill, and the high quality finished product.

These two MODULO-PLUS ES machines are scheduled for start-up within 2017.

With this Hengan order, Toscotec becomes the unique supplier in the market who is able to serve all the top four tissue players in China.


YES
YOUR EXPERT SERVICE

YES
YOUR EXPERT SERVICE

YES HANDLING

Handling service offers the possibility to remake, rebuild and fine-tune the handling system.

Toscotec service team has the knowledge and experience to evaluate the need for spare parts and guarantee their delivery and upgrades, in order to increase production.

PRESS RELEASE | 12TH GENUARY 2017

TOSCOTEC

REBUILT TISSUE MACHINE STARTED-UP

AT LUCART LAVAL SUR VOLOGNE MILL IN FRANCE.

After a comprehensive rebuild supplied by Toscotec the rebuilt PM10 at Lucart Laval sur Vologne mill in France has been successfully started. The rebuild will boost the machine speed from the current 1300 mpm to 1600 mpm for the production of high-quality tissue from virgin or recycled fibers.

Toscotec's turn-key supply included wire and felt section modifications, a new TT SYD-12FT, Yankee steam & condensate, and a TT MachineBrokePulper-MBP75. Complete engineering, erection, commissioning and start-up assistance were also included in the order.

The new TT SYD has replaced the existing cast iron one. The greater evaporation rate increases the production capacity and the Yankee deckle insulations allows an additional saving on steam consumption.

In 2010 Toscotec already supplied a TT SuctionPressRoll (diameter of 1045 mm).

Lucart decided to go ahead with Toscotec finding in the offered technology the right solution to its need of leader tissue producer.

"This investment is a strategic step to strengthen our presence in Central Europe and is part of our integrated strategy of reducing energy consumption in our paper making process" said Massimo Pasquini, Lucart Group CEO.

"We are happy to continue to support Lucart. Our technology is the right partner for its mission which sets continuous innovation, overall product quality, respect for the environment and total client orientation as fundamental values. The same which

PRESS RELEASE | 4TH APRIL 2017

TOSCOTEC HAS RECEIVED IN TOTAL 8 (EIGHT) TISSUE MACHINE ORDER FROM APP.

Two of the Tissue Machines are scheduled to come on stream in Q4 2017 and Q1 2018, respectively. In the meantime, the Italian supplier is manufacturing other 6 tissue machines which are planned for delivery between the Q3 2017 and the first half of 2018. Each tissue machine is capable of producing, among other tissue grades, 300 tpd or about 100,000 tpa of high gsm tissue.

Based on a continued strategic expansion, APP has decided to choose Toscotec's state of the art technology, with the objective of using the most "green solution" available on the market and reducing energy costs. The scope of supply of this major order includes AHEAD-2.0L crescent former tissue machines, with a net trim width of 5.6m, 22 FT diameter Steel Yankee Dryer TT SYD-22FT and Steam Heated Yankee Hoods.

This is Toscotec's most recent innovation, PRODERGY, a new concept developed from the Company's successful line, the AHEAD-2.0, which significantly boosts production and cuts down on the energy costs. In fact, PRODERGY is the 1st tissue machine to combine top production performance and top product quality, with energy efficiency. Its unique configuration of the drying section has taken tissue technology to a whole new level and has set new records for the industry.

The first record to be broken is the diameter of the Steel Yankee: 22 feet, the largest Steel Yankee Dryer ever built for tissue production. The second record pertains to the speed, and therefore to the production output, as Prodergy is the first tissue machine relying on steam energy only that can achieve a maximum operation speed of 2000 m/min.

These features make Prodergy the most green cutting-edge technology available on the tissue market nowadays. Its use of steam energy in the hoods guarantees the lowest possible emissions and environmental impact.

This major order confirms the long-standing cooperation between APP and Toscotec, which in the past has already provided APP with a significant number of Steel Yankee Dryers.

YES

YOUR EXPERT SERVICE

YES
YOUR EXPERT SERVICE

YES BURNERS

Burners are at the core of the hood and air system plant.
Their perfect fine-tuning is linked to crucial aspects of the paper machine, such as production efficiency and energy savings.

PRESS RELEASE | 20TH DECEMBER 2016

TOSCOTEC STEEL YANKEE DRYER TT SYD-22FT: THE BIGGEST EVER DONE IS ON ITS WAY.

On 15th December 2016, Toscotec shipped the first two TT SYD-22FT of 2° generation (diameter 6705 mm) from the port of Marina di Carrara, Tuscany. The first two Steel Yankee Dryers of the largest diameter ever built have left the dock and this is further proof of Toscotec's leadership in the design and manufacturing of the main component of the tissue drying section. The TT SYD-22FT is at the heart of Toscotec PRODERGY tissue machine, which is equipped with a Steam Hood to achieve the maximum operating speed of 2000 mpm.

This extraordinary achievement is the result of Toscotec's investment strategy, aimed to enhance its strength in the tissue and paper industry with the opening of a new technology center dedicated to the complete production cycle of TT SYDs.

From metalworking and precision mechanical processing to thermal treatment in a 10m x 10m oven, all the tests and certifications are made on site, according to Functional European (PED), American (ASME), Chinese (CSEI) and Japanese (JIS) regulations. The new center also houses technical and production offices, as well as a conference room and a customer lounge.

The facility is located in Massa, at 50 km from Lucca, a location chosen for easy and fast access to seaport overseas shipments.

TECHNICAL ARTICLE | 22TH MARCH 2017

TISSUE DRYING STRATEGIES

FACTORS TO CONSIDER TO ACHIEVE YANKEE/HOOD BALANCE FOR THE HIGHEST ENERGY EFFICIENCY.

Dewatering of the paper sheet on a conventional tissue machine is normally accomplished by using a combination of mechanical and thermal processes. Following formation of the sheet, the dry solids content is initially increased to around 40-45% by pressing and vacuum forces. This is followed by evaporation in the Yankee and hood to 93-95% dryness.

The evaporation phase is by far the most energy-intensive process in tissue making. This article will discuss several key factors which influence evaporation and, when optimized, can help achieve the best overall energy and cost efficiency for drying in conventional tissue machines.

Total energy demand

In a conventional tissue mill featuring a state-of-the-art Crescent-former tissue machine operating at speed of 2,000 m/min, with two virgin fiber stock preparation lines using multiple refiners, approach flow with two or single layer headbox, single, double or shoe-press solution, duo-system gas hood and heat recovery systems, etc., the total energy consumption for all processes can be broadly divided as follows:

Total electric power consumption: 750-900 kWh/ton
Total gas consumption in the hood: 650-700 kWh/ton
Total steam consumption to Yankee: 600-700 kWh/ton.

"Average" total energy demand is therefore around 2,000-2,300 kWh/ton or sometimes below. If the machine is using recycled paper as its raw material, these figures will be higher.
As the figures above show, more than 60% of the total energy consumed for producing the conventional tissue sheet is used for evaporative drying in the Yankee and hood. Obviously, the share of this thermal energy consumed in the hood versus that used in the dryer depends on the chosen balance being applied between the two pieces of equipment. With such a large share of total energy going into drying, and energy prices fluctuating widely, it's no surprise that mills are doing everything they can to lower their overall energy consumption, with an eye on the drying process in particular.
In mathematical terms, the drying evaporation energy required by the Yankee and hood to reach a certain % solids content is directly dependent on after-press dryness coming in. It can be described as shown in the following equation, with the most important factor in this equation being the variable E: Dryness at the hood inlet, meaning the percentage of solids as the sheet enters the hood.

$R_w = B \times S \times W \times (L/E-1)$

$R_w = R_w$ hood + R_w Yankee Dryer = total evaporation [g/s] determined by the drying balance between hood and Yankee.

B = basis weight at the reel [g/m2]
S = Pope reel speed [m/s]
W = paper width [m]
L = dryness at the hood outlet [%]
E = dryness at the hood inlet [%]

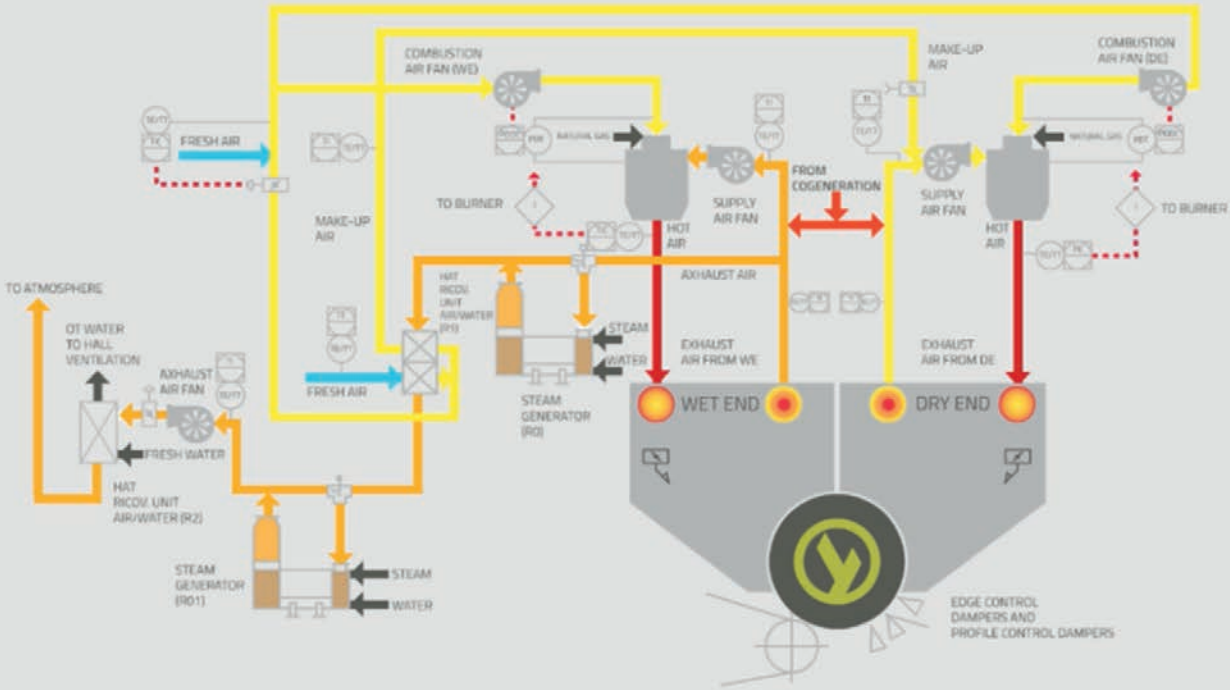
Yankee and hood are inseparable, but each can be optimized

In reality, the Yankee dryer and the hood (Fig. 1) are inseparably intertwined pieces of equipment. But there are many different ways in which the tissue mill can optimize them for best energy efficiency, depending on the specific circumstances and location.

For Yankee dryer technology, there are two main alternatives: the traditional cast-iron Yankee dryer which has been used for well over 100 years, and the new Steel Yankee dryer technology that has been recently introduced and rapidly adopted during the past 15 years. (For further details please see: Steel Yankee Development). Although the Yankee and hood are closely intertwined, their impact on drying costs can be very different. In general, drying done by the hood requires up to 30% more energy, per kg of water evaporated, compared to drying on the Yankee. Therefore, it is usually beneficial from an energy standpoint to maximize drying by the Yankee, possibly by considering a larger diameter unit, and then running the hood according to production priorities and local conditions, especially in terms of available energy sources.

Hood design depends on local circumstances and energy supply

Once the choice of Yankee dryer is made for a machine, it is the hood which completes the picture in the drying section. The choice of hood system design, however, is not straightforward since there are many options to consider. Local energy availability and individual production requirements are the most critical parameters when specifying the hood, and these options need to be well understood to get the best energy and cost efficiency. With choices ranging from a simple suction hood to a gas-heated unit, the best solution will vary from mill to mill. Gas is clearly the most effective fuel for drying, but in some cases steam is the only available source of heat. Gas hoods today are also far less challenging than in the past, and the benefits in terms of flexibility, capacity and overall efficiency make them an attractive proposition. In addition, it is important to note that it is easier to keep the hood system clear of fiber build up with gas than with steam.



Heat Recovery: Different stages provide various benefits

No matter what industry we may be talking about, heat recovery plays a vital role in overall energy efficiency of any operation. The goal for all tissue making operations should be to let no energy go to waste and, specifically, to realize that it makes no economic or environmental sense to simply let exhaust heat from the hood be released to the atmosphere.

Heat recovery should therefore be the starting point in planning any new tissue machine or rebuild. The stages involved can be broken down into four main categories: R0, R1, R2 and R3. Establishing at the outset of a project which of these categories apply to the mill in question helps to focus the heat recovery strategy. The specific solution applied will depend on process design, local heat sources, environmental rules, and on level of investment cost allowed. The recovery stages are defined as follows:

R0 heat recovery, which is only applicable to a gas hood. In this case, the exhaust air from the hood is used to generate fresh steam, via a recovery boiler, which feeds the Yankee. This solution has to be designed with great care according to the hood specific working conditions and hot air system balance. The recovered steam can represent a significant direct use of the hood gas energy which can be returned back to the Yankee in a short loop.

R1, representing air-to-air heat exchange within the hood system by which heated exhaust air is used to pre-heat incoming fresh air, before it is exhausted either to the atmosphere or to the following hear recovery stage. R1 is the main form of heat recovery used when working with a steam-heated hood.

R2 and R3, which are both typically applicable to gas-heated hoods. R2 is normally based on an air-to-water heat exchange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YES YANKEE HOOD & AIR SYSTEM

The Yankee Hoods and the Air System are important elements of the plant, which, if properly optimized, can contribute to energy savings.
For this reason, and especially in today's highly competitive marketplace, it is crucial to achieve their highest efficiency, with as little energy as possible.

which contributes to hall heating and ventilation systems within the mill. This provides a way of heating buildings through recovered exhaust heat, although it is climate and season dependent.

R3, heat recovery involves the installation of a heat exchanger that is used to heat process water, delivering several benefits. For example, it can increase temperature in the dilution water, machine showers, or approach flow circuit. This, in turn, can improve the machine's performance because of better drainage due to lower viscosity, and higher drying efficiency due to the increased temperature. In addition, maintaining a steady process water temperature can also improve the final sheet formation.

Stability and Balance: Critical for getting best paper quality, with lowest energy demand

These four heat recovery categories, R0-R3, give a broad overview of the possibilities for heat recovery in tissue production. But the difference between 'good' and 'excellent' energy performance is all about stability and balance. It sometimes may be possible to increase overall energy efficiency by several percentage points, simply by using the right strategy in process balancing.

Strategies to achieve this include optimizing the balance between Yankee and hood drying, and within the hood, between the contribution of the wet and the dry end sections in the hood. Stability of the process is another essential factor for optimization. As an example: achieving uniformity of dryness, with reduced peak-to-peak dryness variation in the sheet, allows the system to be set for higher drying capacity and higher process stability.

One solution which has been applied is the gas or steam "hybrid" hood, in which the degree of heating contributed by the hood, and in different sections of the hood, can be easily varied, from zero (suction only) upwards. Typically, a hood will blow steam or gas-generated hot air in the wet end, while in the dry end, the hood's role is limited to suction. This is a good solution when energy

reduction is a priority, as it offers reasonable drying capacity, especially in combination with proper heat recovery systems.

In fact, for the reasons mentioned, the best solution in terms of total energy efficiency is to dry the sheet with the Yankee alone – with the hood just providing suction. But this is not always realistic for meeting production goals, so to achieve the mill's needs both for energy efficiency and output volumes, a hybrid solution sometimes can be ideal. Finally, the steam hood can also use heat recovered in the form of condensate from the Yankee, just as the hood's exhaust air can heat incoming air, to keep efficiency at a high level.

The ideal balance between Yankee and hood will depend on the grade of tissue in question in terms of drying capacity. For low basis-weight products such as toilet paper and facial tissue, the "wet-end-only" heating concept is generally fine. In this case the dry end of the hood merely acts as an exhaust system, just keeping the air temperature high enough to avoid water droplets forming inside the hood. You can even use this set up for heavier grades, if you are prepared to sacrifice some speed.

Other factors affecting drying efficiency

There are many other factors which may affect efficiency in drying, but they are beyond the scope of this document to cover in detail. In general terms they include items such as hood cross-nozzle box design, the operating distance from the hood to the Yankee surface, hood frame stability at high temperatures and other issues. Continuous R&D developments are being evaluated in this regard to achieve better machine performance.

Summary and Conclusions

What is the best strategy for achieving the optimal energy efficiency when it comes to the Yankee/hood balance, and overall drying operation? There is no easy answer to this question, but among the things you will want to take into consideration are:

1. Make sure the operating parameters are within the design range of Yankee/hood systems.
2. Consider having the capability to read, on a continuous basis by the DCS or MCS, the main operating parameters of Yankee/hood.
3. Involve experts for process optimization, in terms of energy and efficiency.
4. Consider the possibility to implement specific software for automatic optimization/combination of main operating parameters of Yankee/hood.

PRESS RELEASE | 10TH JULY 2017

TWO NEW TOSCOTEC'S TISSUE MACHINES DELIVERED TO VINDA PAPER (ZHEJIANG) CO., LTD.

In December 2016, the Italian supplier Toscotec S.p.A. has delivered two tissue machines, TM 3 and 4, to Vinda Paper (Zhejiang) to be installed at its Longyou mill. The machines are scheduled to begin installation in the spring and complete start-up in mid-2017.

Vinda Zhejiang mill, catering for east China area market with Shanghai in the proximity of which is strategically located, has registered a sustained growth, since the first two Toscotec supplied tissue machines, TM 1 and 2, were fired up in the last quarter of 2014. Building on the outstanding results of the previous machines, Vinda has decided to invest again in Toscotec's technology in Zhejiang province and in the second half of 2016 has sealed the new orders with the Italian supplier. With these two new machines, TM 3 and 4, Vinda Zhejiang mill is expected to achieve a total production capacity of 210,000 tons/year.

Following start-up in 2016 of other three Toscotec supplied machines in Guangdong and Shandong provinces,

with a total production increase of 90,000 tons/year, the Vinda Group continues uninterrupted its strategic growth in a period of slowdown for the Chinese market. The new tissue machines delivered to Vinda Zhejiang will bring a further increase of 60,000 tons/year.

In line with the long-established and fruitful cooperation between Toscotec and Vinda, Vinda Zhejiang's TM3 and TM4 also present superior technological advantages, benefiting from a wide-ranging energy saving concept, the TT DOES solution (Drying Optimization for Energy Saving), as well as delivering premium quality tissue.

YES

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YES
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YES STEAM

The global YES system includes the installation, commissioning, start-up and fine-tuning of the system in order to guarantee the best performance and the lowest consumption.

PRESS RELEASE | 9TH MARCH 2017

TOSCOTEC TO REBUILD CARTIERA OLONA'S DRYER SECTION

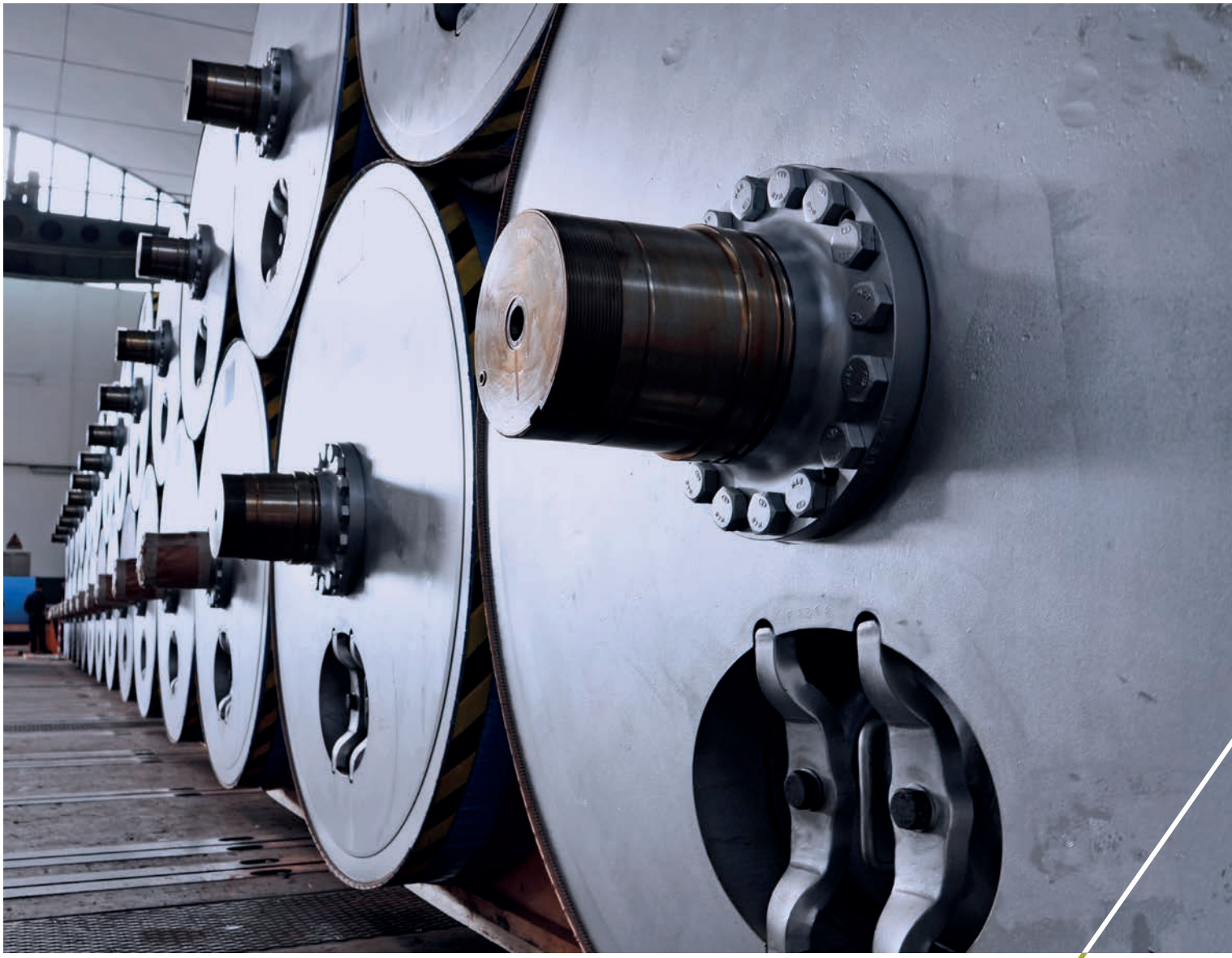
IN GORLA MINORE, VARESE (ITALY).

Toscotec has been awarded a contract to deliver a dryer section rebuilding of Cartiera Olona srl paper machine in Varese, Italy. The start-up of the rebuilt machine is scheduled for the second quarter of 2017.

Cartiera Olona was founded in the 1960' in the Olona River Valley, Varese, covering an area of approximately 20.000 square meters. Currently the paper mill is equipped with a continuous production line for grey coreboard. The annual production is of 50,000 tons of paper suitable for the manufacturing of spiral and parallel wound cores, edge protectors, textile cones and honey comb.

The flexibility and intense activity of research and development enable Cartiera Olona srl to supply products in different qualities to meet customer requirements. Commitment to new technology has allowed the company, for half a century, to serve Italian, European, Middle Eastern and Nord African customers resulting in long lasting partnerships.

According to its dared philosophy the Company has decided to choose Toscotec for its dryer section rebuild on the paper machine. The purpose of



the rebuilding is to implement machine efficiency, reliability and safety in operations. Toscotec's delivery includes 25 new TT SteelDryers in place of casted iron dryers, that will allow the paper mill to increase its drying capacity, production and the width of the paper produced. The existing mechanical drive will be replaced with a new silent drive system. Tail threading will be ropeless from the press section through the new dryer section up to the pope reel.

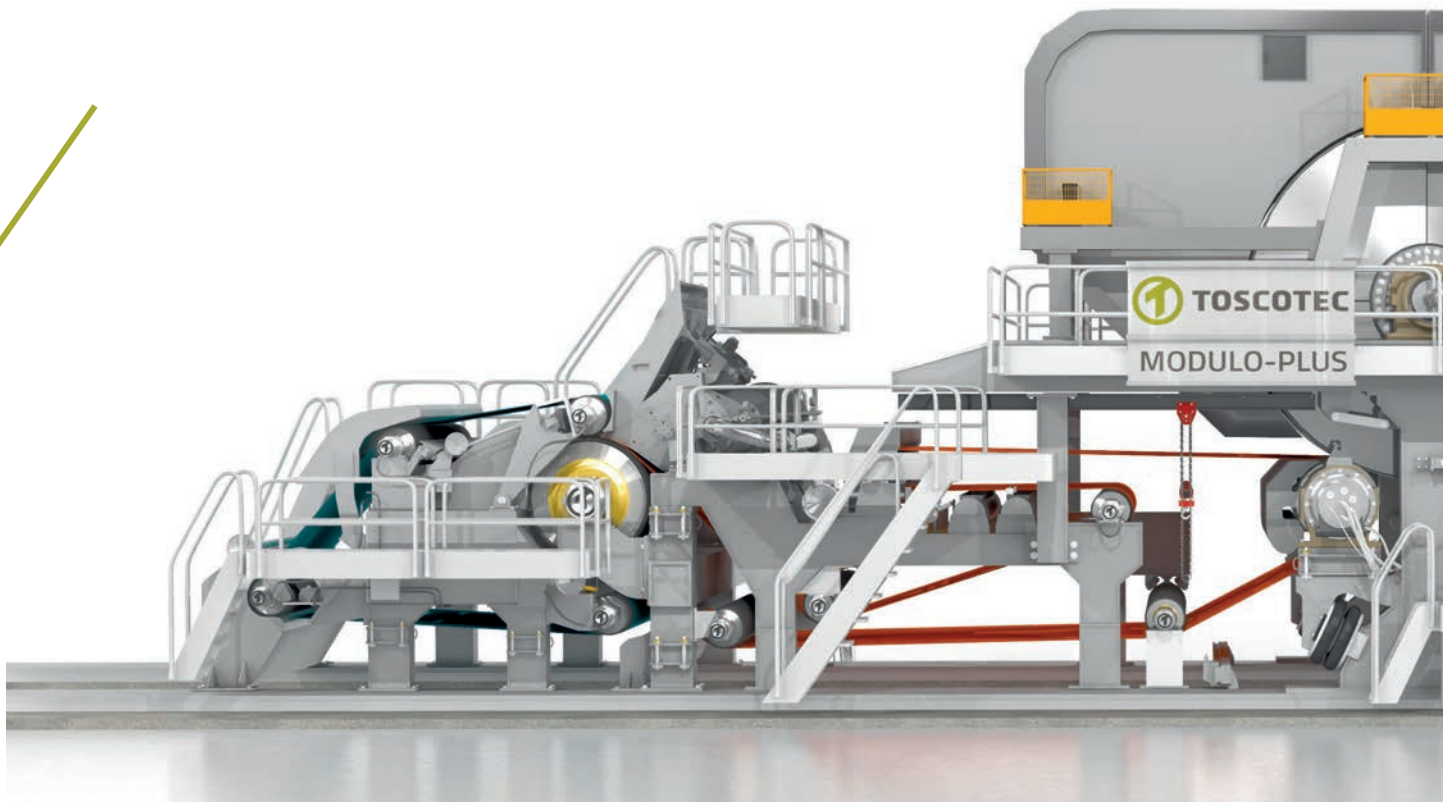
This new project consolidates Toscotec capabilities to provide, not only a wide range of new machinery but also complex rebuild projects based on turn-key concept.

PRESS RELEASE | 23TH MARCH 2017

THE PARTERNSHIP BETWEEN TOSCOTEC AND EUROVAST CONTINUES:

A NEW MODULO-PLUS WILL BE SUPPLIED

FOR CARTIERA DELLA BASILICA AT BOTTICINO'S PLANT.



The Italian company EuroVast has chosen Toscotec again to expand the capacity of its Cartiera della Basilica at Botticino's plant.

The new machine, a MODULO-PLUS crescent former with single press configuration, TT SYD-3200MM and TT MilltechHood, is the perfect solution to meet Eurovast's need: high quality tissue product, attention to energy saving and eco-sustainability were determining factors in choosing advanced Toscotec's technology for this project.

The new TM with a maximum production capacity up to 30,000 tonnes/year and a paper trim width of 2740 mm will replace the existing suction breast roll machine and will be started up in the last quarter of 2017.

Engineering services, installation supervision, commissioning and start-up are all included in Toscotec's scope of supply.

"Technological innovation begins purchasing new state-of-the-art production lines, involving not only an increase of production but above all achieving higher quality products to better meet our consumer needs. After almost 25 years of experience in the private label sector we are ready to satisfy every customer request, always focusing on the promotion of the product and in the development of new solutions". said Vincenzo Romano, owner of Eurovast S.p.A.

The new tissue machine will increase the production of the four existing tissue plants: Botticino - LU, Bagni di Lucca - LU (that already houses a Toscotec MODULO-PLUS), Fabbriche di Vergemoli - LU and Lanciole - PT and the converting facilities of Toringo - LU and Socciglia - LU. Currently the production capacity of EuroVast Group is over 110.000 tons/year.

PRESS RELEASE | 6TH MARCH 2017

ITALIAN PRODUCER ARIETE S.R.L. – FUTURA LINE S.P.A. GROUP –

CHOOSES TOSCOTEC FOR THE INSTALLATION OF A NEW TISSUE MACHINE.

Ariete S.r.l., Italian company producing high quality tissue paper, has ordered a new MODULO-PLUS machine from Toscotec for its paper mill in Cava dei Tirreni (Salerno), Italy.

The new tissue machine replaces the exiting one and startup is scheduled for July 2017.

All the dismantling and assembly operations will be performed and synchronized in order to minimize the mill's downtime. The scope of the supply includes a MODULO-PLUS in Crescent Former configuration with single-layer headbox.

Approach flow, electrical and control systems together with dismantling of the existing machine and installation of the new one, supervision and assistance for startup will all be performed by Toscotec.

Ariete S.r.l. has been working in the field of tissue paper since 1965, manufacturing qualitatively high standard products capable of meeting the different and changing demands of the market.

The paper mill, headquartered in Italy in Cava dei Tirreni (Salerno), spans along a property of 14,000 m2 and has a production capacity of 22,000 tons/year. The company offers its customer a wide range of semi-finished products for hygienic use and for use in the food industry, with productions that vary from 15 gr/m2 to 38 gr/m2 and from 1 to 4 plies of pure cellulose. Traditionally oriented towards innovation and quality in full respect of people and of the environment, Ariete has decided to make this investment pursuant to a new strategy focused on maximizing efficiency.

"Toscotec's offer turned out to be the best on a technological level and the most suitable to our needs. To be competitive on the market, we must have the proper instruments: we are convinced that the new MODULO-PLUS is the technical solution that we were looking for and that will allow us to increment quantity and quality", states Nicola Salsano, Chairman of the Board of Directors at Ariete S.r.l.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YES HEADBOX

An efficient headbox means high quality paper.
That's why there is YES – HEADBOX, the specialized assistance service on any type of machine.
YES - HEADBOX includes both on-site assistance and the intervention by the technical office situated in Marlia (Lucca, Italy), that places all its expertise at the service of the customer.


TOSCOTEC


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TOSCOTEC

PRESS RELEASE | 10TH MARCH 2017

WEPA STARTS UP THE NEW AHEAD-2.0S PM21

TISSUE MACHINE AT ITS PIECHOWICE PLANT IN POLAND.

WEPA group, based in the Westphalian city of Arnsberg, announces the successful start-up of the new Toscotec's 32,000 tpy tissue line installed at Piechowic Mill, Poland. The machine went easily in operation on 9th February, eleven months after the beginning of the works and six days in advance of the official scheduled start-up.

Following the almost twenty-year partnership in supplying new tissue machines, equipment and services for several well-known WEPA's projects, the Italian manufacturer Toscotec was chosen to be the right supplier for the new plant again. The Toscotec turn-key delivery includes a stock preparation system for virgin pulp and brokes, an AHEAD-2.0S tissue machine equipped with TT SYD-15FT and all auxiliaries, electrification & control system. Full engineering, erection, erection supervision, training, start-up and commissioning were also included in the scope of the supply.

The new machine has a width of 2.8 m and will run at a maximum speed of 2,000 m/min, producing, among the other grades, super soft toilet paper from virgin pulp as well as recycled fibre as a raw material.

The new paper machine is already working efficiently, in particular from an energy point of view, and contributes in reducing the ecological footprint of the WEPA Group by reducing CO2 emissions.

The new project will allow the WEPA to optimize the existing logistics structures of all European sites, thus enhancing the competitiveness of the entire group.

PRESS RELEASE | 4TH APRIL 2017

HYGIENIC TISSUE SUCCESSFULLY STARTS UP A TOSCOTEC-SUPPLIED TISSUE MACHINE

AT ITS PIETERMARITZBURG PLANT, IN SOUTH AFRICA.

On 4th April, the South African tissue producer Hygienic Tissue started up their new MODULO-PLUS tissue machine supplied by Toscotec.

With an annual production capacity of 27,000 tonnes, the unit will increase the total mill's production capacity by threefold. Hygienic Tissue provides its customers with a wide range of products for hygienic use and AFH market, made from 100% virgin pulp as well as from recycled paper.

Based on an intensive energy-saving concept, Toscotec's scope of supply included the approach flow system, featuring the ultimate TT SAF® technology, a MODULO-PLUS tissue machine with single-layer headbox, single press configuration and TT SYD-12FT with TT Milltech-MYH (Monosystem gas heated hood), Turbo Blower and Core Extraction unit. The supply also included an electrification and controls package and the steam & condensate system. Toscotec's TT WIND-P tissue slitter rewinder completed the scope of supply.

The excellent cooperation between Toscotec and Hygienic Tissue has allowed the South African tissue maker to achieve immediately high quality tissue paper, optimizing the production cycle, both in terms of performance and energy saving.

Hygienic Tissue Mill plays an important role in the South African tissue market, producing higher value disposable paper products, including toilet tissue, napkins, towels, facial and jumbo rolls. Since 2000 the company has been investing in state of the art manufacturing machinery. This is the first MODULO-PLUS tissue machine installed by Toscotec in South Africa and increases Hygienic Tissue Mill's capacity to make it the largest independent producer of Tissue in South Africa.

PRESS RELEASE | 11TH MAY 2017

TOSCOTEC FINALIZES A DRYING SECTION REBUILDING PROJECT

INCLUDING A NEW DRIVE SYSTEM AND TAIL FEEDING FOR SMURFIT KAPPA ITALIA AT PONTE ALL'ANIA, LUCCA.

Smurfit Kappa Italia has successfully started up its PM3 at Ponte dell'Ania mill, after a dryer section rebuild supplied by Toscotec.

The scope of the delivery was an advanced mechanical transmission section in "silent drive" with a new frame on the drive side for the whole machine, the installation of uni-run vacuum rolls in the first drying battery and an automatic air paper threading system in the first two drying sections and on the size press. The modification has completely changed the dryer section layout with the relocation of fabric rolls, improving machine runnability and reducing noise and vibration. Toscotec service specialists have provided the complete mechanical erection and supervision of the project and the commissioning and start up assistance for the fine-tuning of the new equipment.
"The project was completed before the date agreed upon with SK and the performance was achieved immediately after start-up. The new drive technology exceeds all our expectations with regard to downtime improvements and it allowed a considerable reduction of noise and vibration that will reduce maintenance cost" - says Massimiliano Listi, Mill Manager of Smurfit Kappa Ania.
"This project contributes to strengthening the partnership between Smurfit Kappa and Toscotec" - says Enrico Fazio, Toscotec Sales Manager – P&B division.

"It is worth mentioning that, in addition to this project, which consolidates the long-standing collaboration with Lucca-based SK Ania, in the last two years Toscotec has taken part in almost all the projects developed by Smurfit in South America (Colombia, Mexico and Argentina) and it has just begun an important cooperation with the group in France. With this important rebuild project, Toscotec consolidates its leadership in the dryer section best available technology".

PRESS RELEASE | 27TH APRIL 2017

ITALIAN CARTIERE MODESTO CARDELLA ENHANCES DRYER SECTIO WITH REPEATED ORDERS TO TOSCOTEC S.P.A.

In the last year, the partnership between the Italian machinery supplier and Cartiere Modesto Cardella, became closer with three important orders of advanced TT SteelDryers to rebuild the dryer sections of PM3 and PM4.

A first order of 8 TT SteelDryers and 4 TT Uni-Run Vac-Rolls were supplied and started up in 2014, a second order of 14 new TT SteelDryers in place of cast iron dryers were provided for PM3 in 2016 and already successfully started-up. A third order of 17 TT SDs has been repeated for the PM4. Toscotec Technical specialists will provide supervision, commissioning and start up assistance. The final start-up is scheduled for fall of this year, 2017. Toscotec Steel Dryer is a well-known and a proven solution with over 1200 Dryers running worldwide, providing extremely high drying capacity. The specific design of TT SteelDryer with flat heads welded to the shell allows to produce a wider and uniformed dried sheet. Toscotec was the first to introduce the revolutionary concept of Steel Dryers in the paper industry and it continues as the undisputed leadership worldwide.

About Cartiere Modesto Cardella. The mill, whose location in San Pietro a Vico (Lucca) dates back to 1908, was taken over in 1946 by Cardella's family. The company has invested progressively in rebuilding, technological upgrading and innovation, to achieve current levels of production for corrugated cardboard made from waste paper with a capacity of 200 thousand tonnes per year. Over the years new paper machines were continuously introduced, up to the current day capacity which sees the MC3 (size 250 cm) and the MC4 (width 280 cm) in production.

PRESS RELEASE | 11TH OCTOBER 2017

TOSCOTEC GROWS ALSO IN THE PAPER & BOARD SECTOR.

Toscotec is pleased to announce an important expansion of the company's structure of the Paper & Board division, with a new technical and commercial unit based in Orbassano, in the province of Turin, which fully integrates into the existing team.

"In order to increase the outstanding results accomplished so far in the Paper industry and to achieve the goals we have set ourselves", says Enrico Fazio, Toscotec's Paper & Board Sales Manager "we have decided to add new skills to those acquired in almost 70 years of business.

The integration of highly qualified people, with many years of experience in the paper industry, will enable us to develop new technological solutions. As a result, we will be able to get access to increasingly more challenging projects. The reinforced P & B team will allow Toscotec to respond more quickly and efficiently to the growing market demands and to guarantee improved professional services".

PRESS RELEASE | 18TH MAY 2017

TOSCOTEC SUPPLIED AHEAD TISSUE MACHINE STARTED-UP

AT PAPER PRIME S.A. IN VILA VELHA DE RODÃO, PORTUGAL.

Paper Prime, a company belonging to the Trevipapel Group, and Toscotec announce the successful start-up of the new TM1. The installation and commissioning were performed according to the scheduled time and the start-up went very smoothly.

Toscotec's turn-key project for TM#1 includes a stock preparation plant for dry virgin pulp, AHEAD-2.0S tissue machine with Steel Yankee Dryer TT SYD-16FT, machine auxiliaries including Milltech Gas fired Hood, steam & condensate and dust removal system, electrification starting from medium voltage cabinets & control system, additional plants and complete engineering and erection activity. A three unwind stand rewinder TT WIND-H completes the supply.

"This start-up is a good example of what the two teams can achieve thanks to the efficient combination of Toscotec's latest technology and

excellent team work. We finalized the installation and commissioning in time and only two weeks after start-up the new Toscotec AHEAD-2.0S has achieved the operating speed of 2,000 mpm. It has been a pleasure to be a part of PaperPrime's project and we wish them good luck for their new business", says Marco Dalle Piagge, Sales Director of Toscotec S.p.A.

Located in Lousã, district of Coimbra, Portugal, Trevipapel S.A also has 2 converting plants strategically located in the center of the country, where are converted 20.000 tpy, serving the internal market and exporting its Joker brand products to Spain, central Europe, Africa and South America.

TECHNICAL ARTICLE | 24TH MAY 2017

TT NEXTPRESS: THE EVOLUTION OF PRESS TECHNOLOGY IN TISSUE PAPER PRODUCTION.

Toscotec has introduced a new shoe press that goes beyond the standards of extended nip traditional presses. This new technology allows perfect adaptability to the Yankee dryer profile, thanks to the precise control of two rows of hydraulic pistons, which are finely divided into six independently adjustable pressure areas. This is how the system ensures a perfectly controllable pressure load in the two directions, longitudinal and cross direction, and a prime control of the press profile across its entire width, especially at the edges. As a result, it increases production efficiency of high quality tissue products.

Toscotec's R&D department has worked comprehensively to eliminate the problem of an imperfect press uniformity at the edges, which is a classic issue connected with this technology. We strived to implement a solution that would make the contact element, i.e. the shoe, as flexible and adaptable to the Yankee's deflection profile as possible. Following the extraordinary performance and energy saving results measured on Toscotec's P&B shoe press installations, TT NextPress marks the new target for the drying section of tissue machines.

Flexibility and uniformity of profile control.

The shoe module consists of an aluminum shoe and two rows of hydraulic cylinders, whose number and distance are such that the linear pressure control on the Yankee surface is extremely precise. This allows the shoe pressure to be completely controllable and continuous on the edges of the Yankee. This result has been validated through experiments and operation data, proving that TT NextPress, as opposed to other systems, ensures perfect adaptability to the crown profile of the Yankee.

Load and pressure profile.

Given the same nip load, which is adjustable from 90 to 150 kN/m during TM operations, based on final product requirements, the operator can modify the pressure curve by changing the press tilt during normal machine operations. Tilt is defined as the ratio between the forces exerted by the two rows of pistons in cross direction at the passage of the tissue sheet. The higher the tilt, the higher the dryness rate due to the reduction of the rewetting effect. Hence, compared with a conventional press, the dryness level increases, with operating values ranging from 45 and 48%, according to the process parameters.

Fiber consumption reduction and product quality increase.

Through tilt control, you can optimize the curve profile and therefore the balance between the nip load and the peak point, by maximizing dewatering and maintaining the bulk, for higher tissue quality. According to real measurements, the increase of bulk ranges from 5 to 15% according to TM operating conditions, basis weight and other process parameters. This increase represents the opportunity to reduce the basis weight, and therefore the quantity of fibers used, considering the same characteristics of the final product.

Excellent cross pressure and edge management.

The uniformity of the pressure profile allows for obtaining significantly homogeneous humidity profiles with 2-sigma deviations averaging between 0.3 and 0.5% over the entire width of the format.

Savings on energy consumption.

The application of TT NextPress allows you to achieve high dryness grades with respect to a conventional press, which results in a thermal energy saving up to 25-30% reduction.

Belt life span.

Operational stability, uniform and finely controlled workload, and the ability to move crosswise the belt with hydraulic activation from DCS, make a significant contribution to the useful life of the stocking. The data recorded on operating systems confirm average life spans of more than one year, with operating speeds ranging from 1800 to 2000 m/min.

PRESS RELEASE | 20TH DECEMBER 2016

PAPER PRIME S.A.: THE TT SYD IS DELIVERED!

Paper Prime S.A., company belonging to Trevipapel Group which produces Joker brand hygiene professional products (AFH) in Portugal, is going to install the new tissue machine supplied by Toscotec in Vila Velha de Rodão, Portugal.

The Steel Yankee Dryer TT SYD-16FT has just arrived at the site. Due to its innovative technical characteristics and construction, the TT SYD will guarantee a high drying capacity and significant energy savings to the mill.

The main ten benefits of the TT SYD:

1. Higher evaporation rate resulting in a 30% increased drying capacity for the Yankee Dryer.
2. Energy savings with lower consumption and less power required for the drive.
3. Complete elimination of problems due to porosity which can lead to pin holes.
4. Uniformity of drying across Yankee face length because of consistent properties of steel plate.
5. Wider sheet width capability on existing bearing centerlines.
6. Reduced maintenance due to no head to shell bolts and less inspection needed vs cast iron.
7. Reduced steam energy losses due to patented head insulation.
8. Metallized coating, no need to derate over the life of the Yankee.
9. Homogeneous and elastic material allows for optimal crown.
10. Fast pay back of investment

"We evolved from a small company to be one of the main manufacturers of professional hygiene products (AfH) in Portugal. The new machine in Vila Velha de Rodão will be the third units with an average annual production of 32,000 tpy, producing for the domestic market and exporting its Joker brand products to Spain, Central Europe, Africa and South America.

We believe that Toscotec technology is one the best available on the market. That's why we choose them as our reliable partner to continue our important project", states Paulo Lobo, CEO of Paper Prime S.A.


YES
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YES
YOUR EXPERT SERVICE

YES PRESS ROLLS LINEAR LOAD

The YES service that measures the actual linear load applied between the press roll (suction and/or blind-drilled) and the Yankee.

YES 24

A machine must never stop. That's why there is YES - 24. YES - 24 is the Toscotec service created to immediately answer customer demands and promptly resolve any need.

PRESS RELEASE | 10TH JULY 2017

PRESS RELEASE | 10TH JULY 2017

VINDA PAPER (ZHEJIANG) CO., LTD

SUCCESSFULLY STARTS UP TWO TOSCOTEC SUPPLIED TISSUE MACHINES.

Vinda Paper Zhejiang fired up two Toscotec supplied tissue machines, TM 3 and 4, at its Longyou mill in Zhejiang province. The mill successfully achieved start-up according to schedule and thus increased its production capacity by 60,000 tons/ year.

The new AHEAD-2.0M tissue lines are designed for the production of premium quality tissue products, including toilet paper and facial tissue. Vinda Zhejiang's new mill currently has four Toscotec's tissue machines, two AHEAD-1.5M fired up in 2014 and the new AHEAD-2.0M. In view of the superior performance of the first two, the Vinda Group chose to invest in Toscotec's top-of-the-line tissue machines. The AHEAD-2.0M advanced technology delivers top quality products, in line with Vinda's highest quality standards, and guarantees the lowest possible energy consumption, thanks to a comprehensive energy saving concept, the TT DOES solution (Drying Optimization for Energy Saving).

"I was proud to see another Toscotec's tissue machine start up at Vinda's mill. Under the expert operation of Vinda Zhejiang's technicians, the new AHEAD-2.0M lines will perform to meet the customer's expectations. We also expect to achieve yet again great results in terms of reductions of the energy cost", said Marco Dalle Piagge, Toscotec's Sales Director.

PRESS RELEASE | 6TH OCTOBER 2017

TOSCOTEC IDENTIFIED IN LONDON STOCK EXCHANGE GROUP'S "1000 COMPANIES TO INSPIRE EUROPE" REPORT.

- Toscotec recognised in second edition of London Stock Exchange Group's 1000 Companies to Inspire Europe report.
- Report demonstrates critical importance of high-growth private small and medium sized companies (SMEs) to future European economic growth, innovation and job creation.
- As one of the most advanced industries in the manufacturing and engineering sector, Toscotec talks about its history, its mission and the new challenges of its competitive market.

Toscotec has been identified as one of London Stock Exchange Group's 1000 Companies to Inspire Europe. The report is a celebration of high-growth and most dynamic small and medium sized businesses across Europe.

To be included in the list, companies needed to show consistent revenue growth over a minimum of three years, significantly outperforming their country peers. More detail on the methodology can be found in the report online at www.1000companies.com

PRESS RELEASE | 9TH OCTOBER 2017

TOSCOTEC ACHIEVES 200 TT SYD STEEL YANKEE DRYERS SOLD WORLDWIDES.

Only 18 years after the introduction of the first steel Yankee dryer in the market, Toscotec achieved the unheard-of result of 200 TT SYD (Toscotec Steel Yankee Dryer) sold worldwide. Looking back, let us retrace the steps of this incredible journey.

Toscotec's TT SYD: from invention to innovation.

Building on 40 years of experience in the construction of steel cylinders, in 1999 Toscotec started designing steel Yankee dryers for the tissue industry. In 2000, it launched the world's first TT SYD. With this breakthrough, Toscotec introduced a major change in the market, which was dominated at the time by cast iron dryers and used steel Yankees only for limited applications on tissue machines. It was the beginning of a technological revolution, which led to the supremacy of steel technology over cast iron.

Although the tissue industry criticized this new technology when Toscotec first introduced it, steel Yankee dryers are now acknowledged as the best drying technology for tissue and have been embraced by all major manufacturers.

Toscotec's innovation tapped into the industry's need for energy savings in the energy-intensive papermaking process: the use of steel instead of cast iron allowed a reduction in shell thickness that decreases thermal resistance and thus increases heat transfer. The result was higher drying capacity, achieved by increased steam condensation inside the dryer. Data obtained from steel Yankee dryer's installations confirmed that the heat exchange coefficient and the drying capacity of steel Yankees exceed those of cast iron by more than 30%, given the same dimensions and operating pressures.

Furthermore, Toscotec's patent technology of head insulation guarantees a further reduction in steam energy loss, an important improvement in drying efficiency.

TOSCOTEC REBUILT TISSUE MACHINE STARTS UP AT CORRELL TISSUE, IN DURBAN, SOUTH AFRICA.

On 14th October, after a comprehensive rebuild supplied by Toscotec, PM1 at Correll Tissue in Durban successfully started up.

The scope of supply included a modification of the existing Fourdrinier tissue machine into a MODULO Crescent Former with a new TT Headbox-SLT. The delivery also included a rebuild of the existing approach flow system and of the felt run, as well as the YD doctoring system. In 2006 Toscotec had already supplied a new TT SYD to the mill. The rebuild boosted the machine speed to 650 mpm, for the production of high-quality tissue mainly from waste paper, produced by the extensive printing operations of Novus Holding, one of the most technologically advanced print manufacturing operations in Africa. Complete engineering, erection, commissioning, training service and start-up assistance were also included in the order. "We are glad to partner with such an important tissue producer. Our technology turned out to be the right solution for the customer's need", said Marco Dalle Piagge, Sales Director of Toscotec S.p.A. Conrad Rademeyer, Group Executive, stated: "We are now ready to deal with new market challenges and we are looking forward to achieve great and new results in terms of productivity as well as in terms of machine performance. The new machine will give us the flexibility we need to get a competitive advantage in the market".

PRESS RELEASE | 15TH NOVEMBER 2017

TOSCOTEC SUCCESSFULLY COMPLETED A DRYER SECTION REBUILD FOR SMURFIT KAPPA IN BARBOSA (COLOMBIA).

In 2016 Smurfit Kappa awarded Toscotec with the rebuilding of the Company´s Barbosa paper machine's dryer section. The target operating speed of the machine after startup was set at 1,000 mpm.

Following an extensive project that lasted 25 months, with 36 days of setup from paper to paper, the PM was successfully commissioned and started up in July 2017.

The main target of the project was to improve the efficiency of the PM, by increasing its operating speed and production. The alliance between Toscotec and Smurfit Kappa has lead the packaging company to increase containerboard production to 120,000 tonnes per year which means an increase in the corrugating machines production.

Enrico Fazio, Toscotec's Paper & Board Sales Manager stated, "Toscotec's long-standing experience in dryer section rebuilds, using TT SteelDryer, our unique dryers with an extremely high drying capacity, and the advanced rope-less tail threading system, was the deciding factor in the customer's choice. We are very proud of our partnership with Smurfit Kappa and we would like to thank the SK team in Barbosa for their great cooperation during the entire project".

According to Carlos Mario Londoño, the project manager, "This was a very complex project to carry out. Thanks to the collaboration of suppliers such as Toscotec, we achieved the our goal within the time we had established".


YES
YOUR EXPERT SERVICE

YES
YOUR EXPERT SERVICE

YES CONNECT-VISION

The new device for remote assistance by Toscotec.

Yes – Connect-Vision is the device that puts the operator in contact with the Toscotec expert, allowing him to see on his PC, in real time, what the operator is seeing live, interact with him in a bi-directional exchange of audio-video information, and promptly guide him toward the resolution of the problem.

PRESS RELEASE | 21TH NOVEMBER 2017

A NEW TOSCOTEC SUPPLIED TISSUE MACHINE FIRED UP AT HENGAN PAPER IN CHINA.

Xinjiang Hengan Paper's tissue machine (PM25) was successfully started up at the company's Changji mill.

The new line is part of Hengan's expansion plan, according to which Toscotec supplied two new MODULO-PLUS ES tissue lines to the leading Chinese producer. This start-up marks a success based on the great cooperation between the two technical teams.

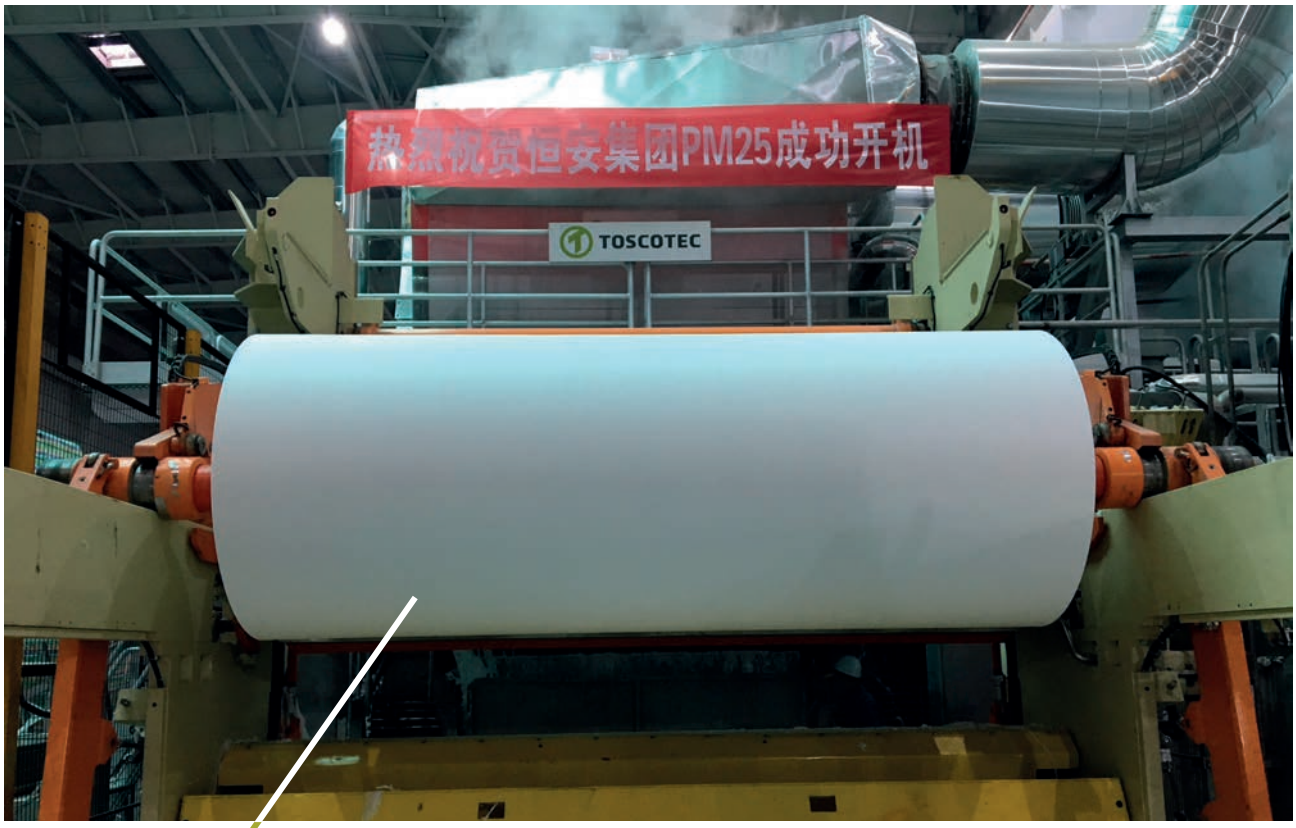
The installation and commissioning were performed in record time, the shortest in Hengan's long history, and one of the most difficult ones, considering the environmental hardship of Xinjiang Autonomous Region in which the mill is located.

The MODULO-PLUS is one Toscotec's ES line tissue machines and it includes the TT DOES (Drying Optimization for Energy Saving) solution, ensuring

enhanced production at low energy consumption. The line will add 25.000 tons per year of high quality tissue to Hengan's current production.

Hengan Team would like to express its gratitude to all members of the Toscotec team. The professional skills and high dedication for work of the people involved led to the successful and very fast start up of this new machine.

"We have developed great experience in managing installations, start -up and assistance services, in close



partnership with the customer. Our Company is glad to support Hengan and be part of their expansion project". says Marco Dalle Piagge, Sales director of Toscotec.

PRESS RELEASE | 23TH MARCH 2017

LUCART BOOSTS PRODUCTION PERFORMANCE WITH A NEW TOSCOTEC

SUPPLIED TISSUE REWINDER AT LAVAL SUR VOLOGNE MILL, IN FRANCE.

Lucart has recently started up a new tissue rewinder TT WIND-P supplied by the Italian machinery producer Toscotec at their facility in Laval sur Vologne – France.

The tissue rewinder model TT WIND-P features 2 unwind stands and handles parent rolls of 2900 mm width and 2600 mm diameter at the maximum speed of 1400 mpm. Toscotec's machinery is equipped with a slitting unit of 150 mm min width, automatic control of all unwinding and rewinding operations and sectional drive system.

This turnkey project includes Toscotec's proprietary automation and control system. This recently developed system is integrated into Toscotec's rewinder technology and guarantees a significant increase in efficiency and productivity. Supervision during erection, commissioning and start-up was performed by Toscotec's

Service division YES – Your Expert Service.

The new "state-of-the-art" rewinder serves the PM9 tissue machine and represents another important collaboration between Lucart and Toscotec after the rebuilding of PM10 in late 2016.

Lucart's sas President Mr. Alessandro Pasquini declared: "Toscotec has been working with us since 2008. They have grown to become a strong partner for Lucart and we are now cooperating on a number of interesting projects. This new rewinder at Laval sur Vologne mill has been performing well and meets our expectations".

Lucart's history goes back to the 1930s when the Pasquini family decided to set up a papermaking factory in Villa Basilica (Lucca). Today the Group's total production capacity is over 300,000 tons/year with 10 paper machines and 58 converting lines.

PRESS RELEASE | 14TH DECEMBER 2017

AGREEMENT SIGNED BETWEEN LUCART AND TOSCOTEC FOR THE INSTALLATION OF THE NEW PM12.

THE LUCCA-BASED LUCART GROUP STRENGTHENS ITS PRESENCE IN THE TISSUE MARKET. LINE AT PORCARI MILL.

Porcari, 6 December 2017 – Focusing even more on the tissue market: this is the goal of Lucart, leading producer in Europe of MG paper, tissue and airlaid products. Lucart Group is replacing one of the two MG paper PMs installed in 1976 at its Porcari plant in the province of Lucca with a new line manufactured by Toscotec, a multinational company leader in the supply of papermaking plants, machinery and technology.

The new AHEAD-2.0S tissue machine is equipped with the most innovative technological solutions.

The forming section is designed

for the future installation of a new system aimed to increase the dry content and thickness of the finished product. The dry section includes the TT DOES solution with the shoe press TT NextPress, a TT SYD-16FT second-generation steel Yankee dryer and high-efficiency hoods that guarantee high quality paper with the lowest possible energy consumption.

The pope reel section, with the new TT REEL-H+, is designed to maintain the characteristics of the sheet, thanks to the use of the core assist drive on the primary and secondary arms. Thanks to this new system by Toscotec, reel change takes place at the maximum operating speed and at full format.

To ensure that the work environment of this new machine complies with the latest regulations, the PM will be equipped with mist and dust suction systems.

The scope of supply includes the new automatic rewinder equipped with 3 unwinding stations, the maximum operating speed is 2,000 mpm, with technology aimed at preserving paper thickness during reel winding.

Installation will be finalized in the second semester of 2018. Toscotec's YES – Your Expert Service – service division will provide supervision for erection, start-up and training of the paper mill's personnel.

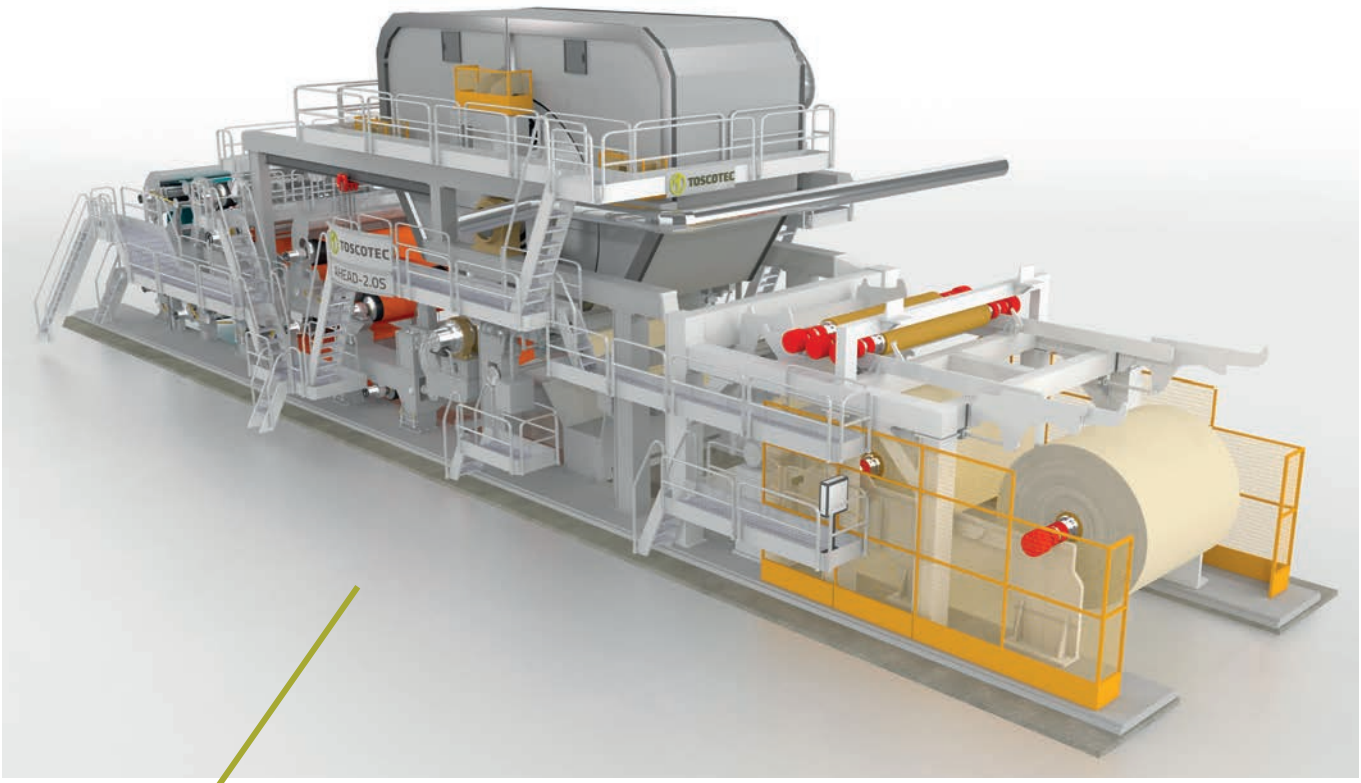
The line will produce high quality tissue paper starting both from pure cellulose and recycled paper. The operating speed is 2000 mpm and the total production is approximately 35,000 tpy.

PM3 will continue the production of all types of MG paper for flexible packaging. PM3 will undergo technical improvement interventions to ensure the highest production quality.

"This important investment", explains Massimo Pasquini, Lucart CEO, "allows us to strengthen our presence in the tissue market. Indeed, we believe that the growth of the company in the market of paper for hygienic-sanitary use in Europe is strategic, and the new PM will foster the development of all the Business Units of our Group. We are pleased to look at the world without forgetting our origins; for this reason, installing cutting-edge technology at our historical Porcari mill, in the province of Lucca, should be seen as a message of trust towards Italy as a whole. Working with a partner like Toscotec was a very

positive experience for us and we hope that this collaboration will continue in the future".

"Once again, our innovative technology allows us to respond in a timely manner to the needs of our customers", stated Alessandro Mennucci, Toscotec CEO. "We are pleased to be able to support Lucart in this new growth project in the tissue market. For us, standing by their side represents an important reference and a further spur for the development of new solutions for an increasingly demanding market".



::: I NOSTRI SOLDI

LE MIGLIORI PICCOLE AZIENDE D'ITALIA

Sono 110: il governo le frena, loro volano lo stesso

Zero politica industriale e troppe tasse. Ma c'è chi riesce a crescere e a entrare tra le mille imprese più promettenti d'Europa

di **ANTONIO SPAMPINATO**

::: *segue dalla prima*

(...) investimenti degli utili in tecnologia, in formazione del personale, in miglioramento dei processi produttivi. Specializzazione e internazionalizzazione.

Sono questi i tratti distintivi delle piccole e medie imprese italiane che sono state in grado di crescere costantemente in barba alla lunga crisi che ha messo in ginocchio il nostro Paese più di altri, schiaccato da una pressione fiscale da record e un debito pubblico accumulato in molti decenni da una politica miope e assetata di denaro (per di più non suo). Veri gioielli del made in Italy che il London Stock Exchange, la società mercato che gestisce la Borsa di Londra e che controlla quella italiana, ha raggruppato nella seconda edizione dell'autorevole selezione delle 1.000 promettenti Pmi europee non quotate.

Quelle italiane sono 110, ma prendendo come riferimento tutte e mille le Pmi selezionate salta all'occhio il tasso di creazione di posti di lavoro: +43% negli ultimi due anni. Oltre a un incredibile tasso medio di crescita dell'ultimo triennio di oltre il 100%. La spina dorsale del Belpaese, amano ripetere gli economisti, è fatta di piccole e medie aziende. Un punto di forza, grazie al quale il debito italiano non ha seguito l'esempio di quello argentino, Paese che ha subito l'onta del default per ben due volte negli ultimi 16 anni. Ma diventa un punto debole quando è necessaria una potenza di fuoco ben più consistente per contrastare l'espansione delle multinazionali, quasi sempre straniere. Se le centinaia di migliaia di individualità sparse lungo lo stivale fossero in grado di seguire l'esempio dei magnifici 110, avremmo le basi solide e tutte le carte in regola per affrontare una "seconda fase" di aggregazione e di conquista dei mercati esteri con pochi eguali nel mondo. Certo, una seria politica industriale sarebbe gradita: le possibilità ci sono, il piano Industria 4.0 ne è un esempio. Ma oggi chi ce l'ha fatta deve ringraziare le proprie forze e capacità, e non può però essere la regola: all'estero non è così. Per questo spesso gli imprenditori parlano di concorrenza sleale: i competitor stranieri hanno i governi dalla loro. Noi no.

Gli eroi del Top 110 del London Stock Exchange combattono sul mercato con un braccio legato dietro la schiena e vincono. Chapeau. Ne abbiamo sentiti diversi per cercare di carpire i segreti del loro successo. Due di loro trovano spazio in questa pagina, una del Nord, l'altra del Sud. Siamo rimasti a bocca asciutta. Non c'è nessun segreto da svelare: per vincere serve passione, intelligenza, capacità imprenditoriale, buon senso. Il successo in fondo si nutre di logica.

Aluberg (Bergamo)

«Lavoro duro e investimenti in tecnologia»

La Aluberg Spa ha sede a Bagnatica, in provincia di Bergamo. Non è un'informazione secondaria, perché secondo quanto dice a *Libero* **Riccardo Spolaor**, amministratore delegato dell'azienda di famiglia specializzata nella trasformazione di alluminio sottile, film plastici e accoppiati flessibili, «siamo in una zona felice dell'Italia: per noi lavora personale specializzato e altamente professionale, che ci mette passione, ed è un grande vantaggio per un'azienda come la nostra. E poi siamo nel cuore dell'Europa».

Peccato per l'Ema...

«Scandaloso, delusione enorme. Per noi poi... Il nostro settore di riferimento è quello farmaceutico, per cui produciamo il foglio in alluminio che contiene le pillole, poi, tra quelle rilevanti, abbiamo una seconda divisione, l'alimentare, facciamo le capsule da caffè Nespresso compatibili».

Un fatturato da oltre 80 milioni di euro, crescita a doppia cifra, azienda inserita nella prestigiosa classifica del Lse. Qualche segreto da svelare?

«Nessuno ci ha mai regalato niente, il segreto è nel lavoro, nei continui investimenti in tecnologia, nell'accumulo di know-how, nell'avere una visione di lungo periodo, nella diversificazione dei mercati di riferimento, nella capacità di vendita su scala globale...».

Qual è l'incidenza dell'export sul vostro fatturato?

«Circa l'80%, esportiamo tutto il mondo e abbiamo la validazione da quasi tutte le multinazionali farmaceutiche».

Ecco il vero segreto...

«La crescita a livello globale è del 2-3%, noi cresciamo molto di più».

LE TOP 110 PMI ITALIANE A PIÙ RAPIDA CRESCITA

A.D. TUBI INOSSIDABILI S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

ADELAIDE S.P.A.
Settore: Viaggi/tempo libero
Forchetta di fatturato: 50M – 75M

ROSSINI S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

ALUBERG S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 75M – 100M

ANASTASI SRL
Settore: Alimentari e bevande
Forchetta di fatturato: 20M – 30M

ANTICA CERAMICA RUBIERA
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

ART COSMETICS S.R.L.
Settore: Manifatturiero
Forchetta di fatturato: 40M – 50M

ARTES
Settore: Tessile
Forchetta di fatturato: 30M – 40M

ASSO GROUP
Settore: Abbigliamento (Manifatturiero)
Forchetta di fatturato: 20M – 30M

BIANCHI INDUSTRIAL SPA
Settore: Commercio all'ingrosso
Forchetta di fatturato: 100M – 150M

BIOFARMA SPA
Settore: Manifatturiero & Ingegneria
Forchetta di fatturato: 50M – 75M

BLM SPA
Settore: Manifatturiero & Ingegneria
Forchetta di fatturato: 150M – 250M

BMR
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

BRUNO GENERATOR
Settore: Manifatturiero
Forchetta di fatturato: 75M – 100M

BRUNO S.R.L.
Settore: Alimentari e bevande
Forchetta di fatturato: 30M – 40M

C.P.C. SRL
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

CAFFO
Settore: Alimentari e bevande
Forchetta di fatturato: 40M – 50M

CARTIERE SACI S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

CARTOTECNICA GOLDPRINT
Settore: Imballaggi
Forchetta di fatturato: 30M – 40M

CASEIFICIO VALDOSTANO
Settore: Alimentari e bevande
Forchetta di fatturato: 20M – 30M

CHEMO GROUP
Settore: Farmaceutica
Forchetta di fatturato: 50M – 75M

CLEAF SPA
Settore: Manifatturiero
Forchetta di fatturato: 100M – 150M

COLFIORITO
Settore: Alimentari e bevande
Forchetta di fatturato: 20M – 30M

COLMAR
Settore: Abbigliamento
Forchetta di fatturato: 100M – 150M

COMAC SPA
Settore: Macchine per la pulizia
Forchetta di fatturato: 75M – 100M

COMACCHIO S.R.L.
Settore: Lavorazioni a macchina
Forchetta di fatturato: 40M – 50M

COPAN ITALIA SPA
Settore: Salute
Forchetta di fatturato: 100M – 150M

COSMOPOL SRL
Settore: Sicurezza
Forchetta di fatturato: 50M – 75M

CPA SRL
Settore: Lavorazioni a macchina
Forchetta di fatturato: 30M – 40M

CRIPPA S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

CROMODORA WHEELS SPA
Settore: Manifatturiero & Ingegneria
Forchetta di fatturato: 150M – 250M

DAEM SPA – BUONRISTORO V. GROUP
Settore: Lavorazioni a macchina
Forchetta di fatturato: 100M – 150M

DEMETRA
Settore: Alimentari e bevande
Forchetta di fatturato: 20M – 30M

DMT
Settore: Abbigliamento (Manifatturiero)
Forchetta di fatturato: 75M – 100M

DOLCIARIA ACQUAVIVA
Settore: Alimentari e bevande
Forchetta di fatturato: 30M – 40M

ECONORD
Settore: Servizi ambientali
Forchetta di fatturato: 150M – 250M

ELETTROSUD S.R.L.
Settore: Elettronica
Forchetta di fatturato: 20M – 30M

FARA INDUSTRIALE S.R.L.
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

FARMOL S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

FILTREX S.R.L.
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

FINSEL S.R.L.
Settore: Utility
Forchetta di fatturato: 40M – 50M

FIORENTINI
Settore: Alimentari e bevande
Forchetta di fatturato: 50M – 75M

FLOTT
Settore: Alimentari e bevande
Forchetta di fatturato: 50M – 75M

FORA
Settore: Salute
Forchetta di fatturato: 40M – 50M

FORGIALLUMINIO 3 S.R.L.
Settore: Manifatturiero
Forchetta di fatturato: 20M – 30M

FORMENTI & GIOVENZANA SPA
Settore: Manifatturiero & Ingegneria
Forchetta di fatturato: 150M – 250M

FULL SPOT S.P.A.
Settore: Abbigliamento (Manifatturiero)
Forchetta di fatturato: 50M – 75M

GALBA S.R.L.
Settore: Lavorazioni a macchina
Forchetta di fatturato: 50M – 75M

GALILEO
Settore: Commercio all'ingrosso
Forchetta di fatturato: 50M – 75M

GMM S.P.A.
Settore: Lavorazioni a macchina
Forchetta di fatturato: 30M – 40M

GOMA ELETTRONICA S.P.A.
Settore: Elettronica
Forchetta di fatturato: 30M – 40M

H.S.A. COSMETICS
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

HAEMOTRONIC
Settore: Salute
Forchetta di fatturato: 30M – 40M

HERNO
Settore: Abbigliamento
Forchetta di fatturato: 50M – 75M

HINOWA S.P.A.
Settore: Lavorazioni a macchina
Forchetta di fatturato: 30M – 40M

HUWELL
Settore: Prodotti chimici
Forchetta di fatturato: 30M – 40M

ILCAM S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 150M – 250M

INDUTEX
Settore: Abbigliamento
Forchetta di fatturato: 20M – 30M

ISAIA
Settore: Abbigliamento
Forchetta di fatturato: 40M – 50M

LA FINESTRA SUL CIELO
Settore: Alimentari e bevande
Forchetta di fatturato: 20M – 30M

LA SELVA PESCA S.R.L.
Settore: Alimentari e bevande
Forchetta di fatturato: 30M – 40M

LA SPORTIVA
Settore: Abbigliamento (Manifatturiero)
Forchetta di fatturato: 75M – 100M

LANIFICIO LUIGI RICCERI
Settore: Tessile
Forchetta di fatturato: 30M – 40M

LTC
Settore: Manifatturiero
Forchetta di fatturato: 150M – 250M

MARE SPA
Settore: Prodotti chimici
Forchetta di fatturato: 100M – 150M

MARGARITELLI FERROVIARIA S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 75M – 100M

MARINI IMPIANTI
Settore: Ingegneria
Forchetta di fatturato: 20M – 30M

MARIO LEVI S.P.A
Settore: Tessile
Forchetta di fatturato: 75M – 100M

MARMI CARRARA SRL
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

MAZZUCCHELLI 1849 SPA
Settore: Manifatturiero & Ingegneria
Forchetta di fatturato: 150M – 250M

MILLEUNO S.P.A.
Settore: Viaggi e tempo libero
Forchetta di fatturato: 100M – 150M

MODUS F.M. S.P.A.
Settore: Servizi Facility
Forchetta di fatturato: 20M – 30M

MONVISO
Settore: Alimentari e bevande
Forchetta di fatturato: 30M – 40M

MORETTO S.P.A.
Settore: Ingegneria
Forchetta di fatturato: 20M – 30M

NARDI S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

NERI S.P.A
Settore: Servizi per il paesaggio
Forchetta di fatturato: 20M – 30M

NEWCHEM S.P.A.
Settore: Farmaceutica
Forchetta di fatturato: 50M – 75M

NORD INGEGNERIA S.R.L.
Settore: Ingegneria
Forchetta di fatturato: 30M – 40M

OTTOD'AME
Settore: Abbigliamento
Forchetta di fatturato: 20M – 30M

PAGANI
Settore: Design
Forchetta di fatturato: 50M – 75M

PALMIERI GROUP
Settore: Costruzioni
Forchetta di fatturato: 50M – 75M

PANDOLFO ALLUMINIO SPA
Settore: Manifatturiero
Forchetta di fatturato: 100M – 150M

PARMOVO S.R.L.
Settore: Alimentari e bevande
Forchetta di fatturato: 100M – 150M

PHSHOP SR
Settore: Farmaceutica
Forchetta di fatturato: 50M – 75M

PIETRO ROSA TBM
Settore: Ingegneria
Forchetta di fatturato: 50M – 75M

PROVASI
Settore: Design
Forchetta di fatturato: 30M – 40M

RASELLI FRANCO
Settore: Design
Forchetta di fatturato: 75M – 100M

RIELLO ELETTRONICA GROUP
Settore: Tecnologia
Forchetta di fatturato: 150M – 250M

SA.GE.VAN. MARMI
Settore: Design
Forchetta di fatturato: 30M – 40M

SACCHETTO S.R.L.
Settore: Alimentari e bevande
Forchetta di fatturato: 30M – 40M

SANTA MARGHERITA
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

SIDER INGEGNERIA S.P.A.
Settore: Ingegneria
Forchetta di fatturato: 50M – 75M

SOLARI DI UDINE
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

SPEA
Settore: Manifatturiero
Forchetta di fatturato: 75M – 100M

SPECIAL SPRINGS S.R.L.
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

STILCURVI
Settore: Manifatturiero
Forchetta di fatturato: 20M – 30M

SUGAR S.R.L
Settore: Vendita al dettaglio
Forchetta di fatturato: 40M – 50M

SUTTER INDUSTRIES S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

TECNAU SRL
Settore: Lavorazioni a macchina
Forchetta di fatturato: 50M – 75M

TECNIPLAST S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 150M – 250M

TECNOPRESS
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

TOSCOTEC S.P.A.
Settore: Manifatturiero & Ingegneria
Forchetta di fatturato: 100M – 150M

TRAVAGLINI
Settore: Manifatturiero
Forchetta di fatturato: 30M – 40M

TRIVI SRL
Settore: Manifatturiero
Forchetta di fatturato: 20M – 30M

UNITEC S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

UNIVERSAL PACK S.R.L.
Settore: Manifatturiero
Forchetta di fatturato: 20M – 30M

VETRORESINA
Settore: Manifatturiero
Forchetta di fatturato: 50M – 75M

VHERNIER S.P.A.
Settore: Commercio all'ingrosso
Forchetta di fatturato: 20M – 30M

VITILLO S.P.A.
Settore: Manifatturiero
Forchetta di fatturato: 40M – 50M

WALDNER TECNOLOGIE MEDICALI S.R.L. S.U.
Settore: Commercio all'ingrosso
Forchetta di fatturato: 30M – 40M

P&G/L

Flott (Palermo)

«Puntiamo su ricerca e personale»

Con un fatturato di circa 60 milioni, Flott Spa, fondata 40 anni fa da Tommaso Tomasello, azionista di riferimento, è stata in grado di macinare una crescita che ora si avvicina alla doppia cifra. Il tutto in una situazione di mercato difficile, per più motivi. La sede produttiva di Flott, società attiva nella trasformazione e preparazione di prodotti ittici è ad Aspra, borgo marinaro in provincia di Palermo. In quella Sicilia che ha subito più di altre Regioni il peso della crisi. Il suo mercato di riferimento è l'Italia, tra i pochi Paesi europei ancora in bilico. E la materia prima non è più così abbondante (cambiamenti climatici e politiche sbagliate tra le cause). A **Stefano Azzali**, direttore generale di Flott, la cui sede commerciale è a Reggio Emilia, chiediamo come l'azienda sia stata in grado di crescere così rapidamente.

Punti di forza?

«Investiamo molto e costantemente in tecnologia, in ricerca e sviluppo e in formazione del personale: sono i nostri punti cardine».

All'estero andate poco.

«Esportiamo, in più di 40 Paesi, tra il 15 e il 18% del fatturato. Per noi sono mercati in cui crescere nel lungo periodo. Per questo esportiamo ottimi prodotti: vogliamo costruire un rapporto serio e duraturo».

L'Italia è una zavorra?

«Pesa ma abbiamo una situazione finanziaria solida, e grazie a un controllo di gestione quasi settimanale abbiamo attraversato a schiena dritta questi anni di crisi».

Prospettive?

«Buone, clima permettendo. Ci vorrebbe una regolamentazione della pesca a livello mondiale».

E una politica all'altezza.

VkVSlyMjVm9sb0Vhc3lSZWFkZXJfTW9ucmImIyMjZWYwZGFmNDQtNTRiZS00Yml4LWIyNjMtOTE5MmQ4NmQzMzk3IyMjMjAxNyOxMi0yOVQxODozOTo0NyMjI1ZFUg==

PRESS RELEASE | 11TH JANUARY 2018

AUSTRALIAN TISSUE PRODUCER ENCORE TISSUE STARTED UP A NEW TT SYD AT ITS LAVERTON NORTH MILL.

TOSCOTEC IS CONFIRMED AS GLOBAL SUPPLIER OF STEEL YANKEE DRYERS, WITH INSTALLATIONS ACROSS FIVE CONTINENTS.

On October 19 2017, Encore Tissue started up a new Toscotec Steel Yankee Dryer on ET3 at its Laverton North mill, Melbourne, Australia. The rebuilt tissue machine started producing high quality tissue paper immediately after start-up.

The Australian tissue maker purchased a second generation TT SYD of 3600 mm diameter, to replace an existing cast iron Yankee.

Following the installation of Toscotec's steel Yankee dryer, Encore Tissue

expects to increase the machine operating speed from 1,400 mpm to 1,900 mpm. They also expect an increase in production and machine efficiency, and a real improvement of the finished product quality, from the point of view of homogeneity of the tissue structure.

With this sale, Toscotec sets a new important record in the steel Yankee dryer market: 203 TT SYD sold in 36 countries across five continents.

Marco Dalle Piagge, Toscotec Sales Director, stated: "In the year 2000 we installed the first steel Yankee dryer in Italy. Eighteen years on, we have TT SYD running in mills all over the world. We are proud of the technological revolution we have pioneered and of the journey - certainly not without obstacles – that led our company to an unquestioned leadership in the tissue market".

Stefano Marenco, Toscotec R&D Director, stated: "What we have achieved is an important recognition, but it will not be the end of the road. Toscotec is always looking for solutions that can improve the tissue process and reduce the energy cost. TT SYD is not an exception. Our R&D department is abuzz and there will be new developments soon".


TOSCOTEC
YES
YOUR EXPERT SERVICE

YES
YOUR EXPERT SERVICE

YES PLANT OPTIMIZATION

More presence, more efficiency.
A fundamental objective of the Toscotec Service Division programme is to provide guarantees that customers receive a dedicated assistance service.

YES GENERAL MAINTENANCE

A service that produces efficiency.
A machine is like an athlete's body. It is a complex system that has to deliver the best possible performance in order to deliver a real competitive edge.

PRESS RELEASE | 16TH JANUARY 2018

HENGAN INTERNATIONAL CELEBRATES THE SUCCESSFUL START-UP OF A NEW MODULE

PLUS PM26 AT ITS CHANGJI MILL, XINJIANG – CHINA.

The leading Chinese producer of hygiene and sanitary products has successfully started up the second of two Toscotec-supplied tissue machines installed at its Changji mill.

Hengan and Toscotec sealed their partnership at the end of a project that started one year ago with the order of two tissue machines, PM25 (started up in November 2017) and PM26, producing a total increase of 50,000 tons per year to Hengan's production.

Both tissue machines have a production speed of 1,600 m/min and a width of 2.8 m. They are equipped with single layer headbox, one large diameter TT SuctionPressRoll, second generation TT SYD with improved rib design, TT Milltech natural gas high efficiency hood and steam and condensate removal system. The scope of supply also includes DCS/MCS, as well as erection supervision, start up assistance and training programs.

Hengan project team stated: "We are excited to start this new project. Toscotec-supplied tissue machines have all the technology we need to produce high quality tissue and to reduce the operating cost of our mill. We want to thank all those who contributed to the success of this partnership project".

Marco Dalle Piagge, Toscotec Sales Director: "Now the two machines are running at their target operating speed and they are already producing marketable tissue. In spite of the environmental hardship of Xinjiang Autonomous Region in which the mill is located, everything goes fine and thanks to the good cooperation between our service team and the mill's personnel, we achieved both start-ups in a very short time. It's another success to add to our professional experience".

PRESS RELEASE | 1ST FEBRUARY 2018

TOSCOTEC WILL PROVIDE FOUR NEW AHEAD-2.0M TISSUE MACHINES TO VINDA HUBEI XIAOGAN MILL.

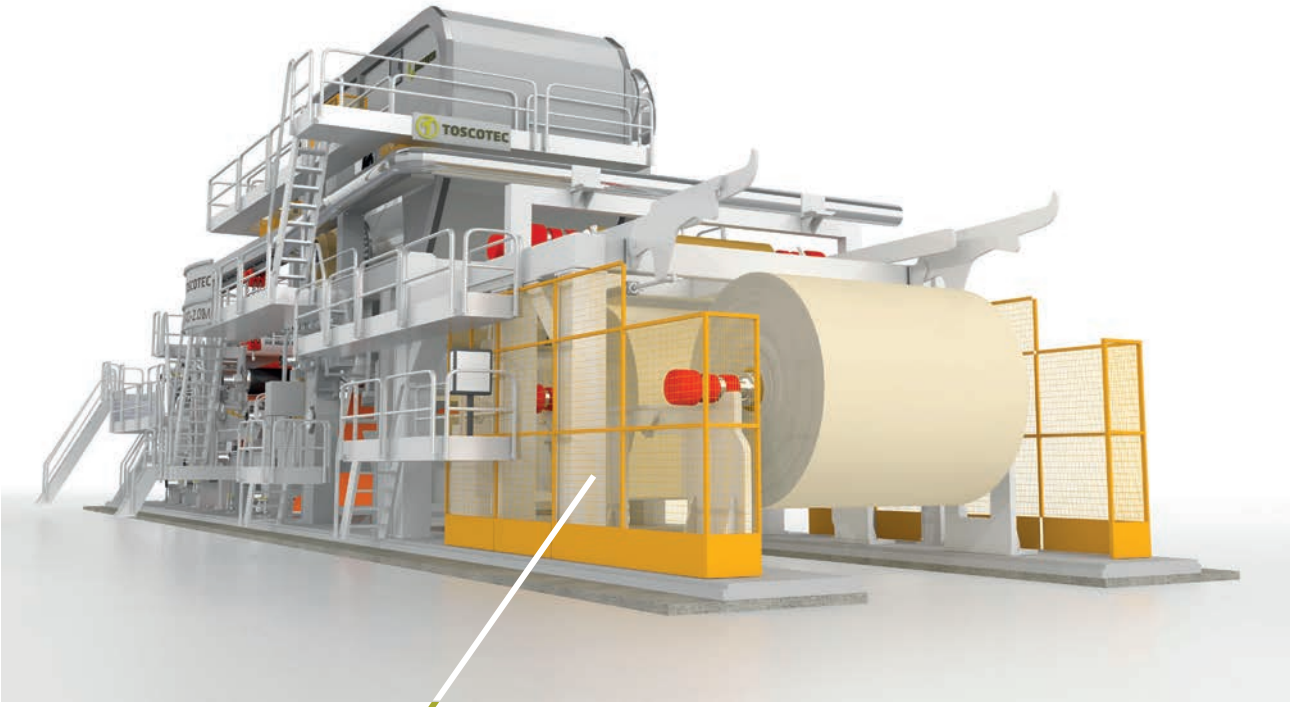
Vinda International Group purchased four new Toscotec AHEAD-2.0M tissue machines, to be installed in its new production base in Xiaonan district, Xiaogan, Hubei. Toscotec will deliver the first two lines in mid-March and the second two in mid-May 2018.

PM1, PM2, PM3 and PM4 will have similar configurations, including second generation large diameter TT SYD and Toscotec's most recent technological developments in dryness efficiency, taking its widely acknowledged energy saving results to the next level.

The four AHEAD-2.0M are scheduled to come online by the end of 2018, leading to a total production increase of over 120,000 t/y for Vinda. This year the Italian supplier is also delivering two AHEAD 2.0M tissue machines to Vinda's new Yangjiang mill in Guangdong. Overall, these six

Toscotec-supplied lines will add a total of over 180,000 tons to Vinda International's annual production output.

Toscotec Chief Executive Officer Mr. Alessandro Mennucci stated, "We know that this large project at the heart of China's central region is of strategic importance to Vinda, and we are proud to be part of it. Toscotec will be there with today's best available tissue technology, including our latest advancements. I am confident that



Vinda will appreciate the benefits of the AHEAD-2.0M in terms of both tissue quality and consumptions".

Located in the high-demand central China tissue market region, Vinda's new Hubei mill will become another important strategic production base for Vinda Group.

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