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TISSUE WORLD MAGAZINE

IRAN

At a turning point? A new generation of consumers for a Middle East tissue leader.

MARKETISSUES

Ukraine tissue surviving amid national corruption, revolution and military conflict.

PLUS

World News

Resolute seeks punitive damages against Greenpeace over 'Forest Destroyer' campaign.
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'Retail climate change' and a US windfall for private.

Technical Theme: Chemicals

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Georgia-Pacific Chemicals' NAVIGATOR 'breakthrough' for Yankee Dryers.

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Private label and brands: Which has the edge now? Industry specialist Ron Shirk talks to TW

Right: VGP chief executive and general manager Illia Miretskyi in this issue's MarketIssue.

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Iran 'at a turning point' and ready for business home and away

Iran's tissue professionals are ready for business more than ever. That's the overwhelming impression I came away with having spent time in and around Tehran for our Country Report.

The talk is of creating markets, getting in there first, top technology, improving quality, increasing capacity, transport 'talking loudest,' the export imperative, historic Silk Road trading traditions, market shrewdness. It's all onwards and upwards.

After Turkey the country is a tissue leader in the Middle East, an initially surprising prominence given recent circumstances but perhaps less so given the deeper-rooted changes powering Iranian society.

It is just the last three years which have seen growth outstrip rivals, and this comes despite US, EU and UN trade sanctions being imposed at various points during the last ten years, and with relaxation of certain sanctions taking place only as recently as January 2016 following the implementation of the Joint Comprehensive Plan of Action.

Real GDP is expected to grow by 4% this year, oil production has been boosted, a moderate population boom is underway, and that population is relatively young with an average age of 29.6 years in 2015. Like the young the world over they are seen to be more progressive and willing to try new things, one of which is choosing to live in cities and embracing modern retailing techniques.

Retail tissue is expected to benefit as brands proliferate and as consumer awareness of tissue and hygiene products grows due to increasing hygiene standards and consumer perception, and as middle-class consumers spend more and make tissue products an essential part of the daily shopping cart.

The market registered 5% growth in volume terms (tonnes) in 2015 over the previous year, and is expected to remain healthy over the coming five years, with a volume CAGR of 6% through 2020.

Several new tissue paper mills have recently come or are expected to come on stream in the next year or two.

Cultural imperatives require targeted growth. As a top producer put it: "For Muslim countries, it's natural for us to have low tissue consumption, so we are finding other ways to boost capacity. There's a lot of focus on facial tissue and towels. We need to go to the consumer, not wait for them to come to us."

Tissue is expected to continue to grow strongly in the next ten years. The average growth rate in home consumption is expected to be around 10% per year until 2023, export markets equally healthy.

Iran is a relative newcomer to tissue: the first recorded product was in 1980. It looks set to make rapid strides.



Helen Morris

*Editor,
Tissue World magazine*

TW Istanbul set for impressive full trade show launch

The most recent addition to the global Tissue World portfolio is set to break records at the now fully fledged trade show Tissue World Istanbul, Turkey, 27-29 September.

A wide range of companies will be joined by a high number of tissue manufacturers and converters on the show floor, held this year for the first time at the Istanbul Congress Centre (ICC).

Like the fascinating city of Istanbul itself, the trade show and conference will be the gateway to the ever-growing tissue industry in Eastern Europe, Russia, CIS, the Middle East, Central Asia and Africa.

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Ukraine: How does an industry survive corruption, revolution and military conflict?

When Greg Grishchenko first reported on the Ukrainian tissue market the country was full of hope for prosperity after the 2004 Orange Revolution. Here, he reports again on a tumultuous 12 years.

The Orange Revolution was ushered in on promises of economic growth, a fight against corruption, a turning away from Russia, and increasing cooperation with the European Union.

The following decade culminated in the 2014 popular uprising to remove a corrupt political system from power, the Russian annexation of the Crimea Peninsula, and the brutal civil conflict in the eastern part of the country. My recent visit was marred with fading expectations for better economic prospects that might arise out of association with the European Union, but there are signs of hope.

For five years prior to 2014, the tissue market had shown decent average growth at nearly 3% through growing personal income and paper consumption. Tissue performance figures have suffered dramatically since.

Some 86% of the country's current \$125 million tissue market is for toilet paper consumption, with the other tissue products like paper towels and napkins at 7% each. One of the most critical consumer society indicators – tissue expenditure – started to react almost immediately.

As an outcome of reduced consumption and territory loss (Crimea and part of Donbass), in 2015 the entire volume of the bathroom tissue segment fell 21.3% when compared with 2014 (79,700 tonnes vs 101,300 tonnes). Similarly the napkin segment volume fell 20% when the population affected by worsening economic conditions cut spending on "non-essential" items. Paper towels were a growing category before crisis and fell only 8% (9,600 tonnes in 2015 vs 10,300 tonnes in 2014).

This year has seen signs that the decline is levelling out. According to trade association UkrPapir, in the first quarter of 2016 entire tissue production fell only 0.3% (from 42,285 tonnes to



Greg Grishchenko



Industry analyst

42,155 tonnes). Jumbo roll production in Ukraine fell 1.3% and the highest volume share product, toilet rolls, fell 6.9%. Despite the great efforts of the industry businesses to sustain effective operation, it is quite hard to forecast the 2016 annual outcome due to the crisis in eastern Ukraine. While the majority of suppliers continue to operate routinely, some companies – due to economic hardship or simply being in the middle of a war zone – closed their doors.

A decade ago the supply of consumer tissue products in Ukraine, especially toilet paper, constantly surpassed demand. At that time the volume of toilet paper produced in Ukraine exceeded demand for about 25%. The market picture was blurred by the fact that the volume of exported toilet paper (mostly to Russia) was twice the difference between production and demand. This oddity was explained by poor government statistics and "grey" market effect.

Nowadays, statistics and data bookkeeping has improved. This article used information provided by reputable sources such as UkrPapir, Pro-Consulting and market research departments from the country's major paper mills.

The current Ukrainian bathroom tissue market is self-sufficient in which around



Above: Gambini Line at VGP

94% of its volume is being produced in the country and only 5-6% is being imported.

Export-import

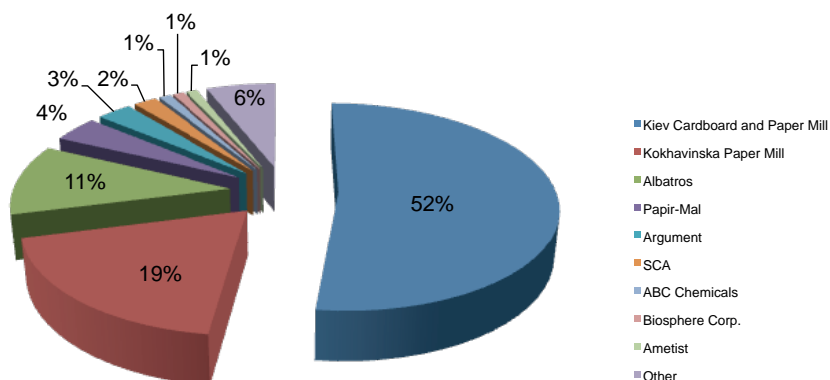
In financial terms, the current volume of imported tissue goods shows gradual growth. However, this is misleading due to the devaluation of the Ukrainian currency, hryvnia, which lost over 70% of its value since the central bank let it fluctuate in February 2015. Indeed, the volume dynamics of tissue imports to the Ukraine reflect similarly to the entire market trend – decline. Imports of bath tissue in 2015 fell 53% from the previous year while in 2014 they grew 25.3% from 2013. Such unpredictable changes show the impact of a military conflict on basic consumer need. The imported paper towel category represents the least used tissue household item in the Ukraine and it kept falling two years in a row (50% in 2014 and 36.7% in 2015). The import volume of paper napkins is insignificant (581 tonnes in 2014) and declined nearly 40% in 2015. Regardless of the market decline, the key importer SCA Hygiene Ukraine (through the brands Zewa and Tork) keeps its presence in the country, increasing its share in bath tissue imports from 28% in 2014 to almost 60% in 2015.

According to Kiev-based market analysis think tank Pro-Consulting, export volumes from the Ukraine in 2014 reached nearly 33,000 tonnes, mostly from recycled stock (only about 3,800 tonnes from virgin tissue) with the largest share of bath tissue (79%) followed by paper towels (17%) and napkins (4%).



Above: Gambini line at Obukhiv Mill

Bath Tissue Suppliers in Ukraine (2015)



The entire Ukrainian export market is currently carried out by mostly three principal manufacturers: Kiev Cardboard and Paper Mill (KCPM) – 87% of bath tissue, Kokhavinska Paper Mill – 49% of paper towels and VGP – 74% of napkins. In 2015, KCPM and VGP lost 5% and 7% from their shares respectively, while Kokhavinska PM increased its share to 59%. The entire export volume slightly grew in 2015 due to the growing participation of small lower cost producers providing increased amount of goods at lower price.

Production

The uncontested leader in Ukraine's tissue making is Kiev Cardboard and Paper Mill (KCPM) based in Obukhiv, Kiev, produced over 71,100 tonnes of tissue products in 2015 – a loss of 11.7% from 2014. KCPM is one of the largest tissue and paperboard manufacturers in Europe with ISO 9001 14001 certification and own

brands of tissue products. In addition to popular brands (recycled stock –made Obukhiv65 and white virgin Divo, the mill recently developed new virgin bath tissue trademark Soffione for the premium segment. KCPM employs 2,200 staff and is a part of the Pulp Mill Holding from Austria. It runs two Voith paper machines and in March 2016 signed an agreement with French company ABK Group to upgrade press section on PM2. The mill invested over \$70 million in the cogeneration plant three years ago and with the coming upgrade it will further save energy on paper making. On the converting side a slitter/rewinder by A.Celli and a number of modern lines by Omet, Gambini and Futura that were purchased a few years ago, helped the KCPM mill recover from the volume losses.

Of the estimated two dozen tissue goods producers in Ukraine, the strongest companies are integrated mills making their own tissue stock in parent rolls: Kokhavinska Paper mill (Lviv region), Papir-Mal (Zhytomyr region), Lviv Paper and Board Company (Lviv) and Dnipro Paper mill (Dnipro). However, all integrated mills still operate timeworn paper machines that despite modernisation are behind the latest state-of-the-art crescent tissue formers that were being purchased by its neighbour for the last fifteen years. A much better picture takes place in tissue converting and packaging where industry leaders like KCPM and VGP run world-class equipment from Italian suppliers.

There is still a considerable group of small fabricators of grey recycled bathroom rolls and household tissue. Locally they are named "motalshchiki" (winders), with simple off-brand equipment taking the lowest price niche

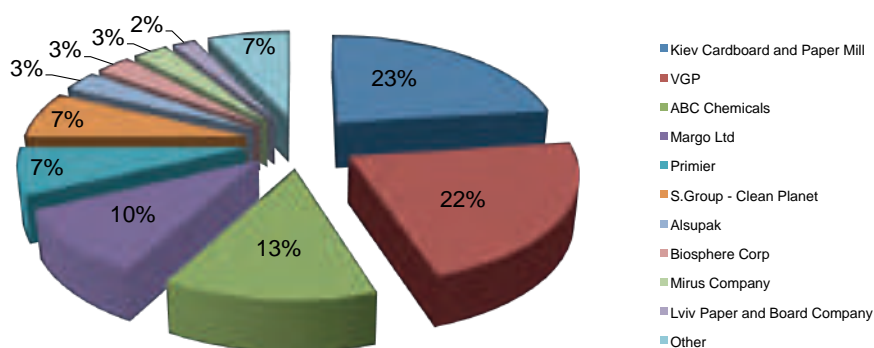
and even copying legitimate brands Obukhiv65 and Kokhavinka.

Tissue World spoke with Oleksiy Startsev, KCPM's sales development manager, who organised an exclusive interview with the magazine. The key to the mill's resilience during hard times, he said, is the ability of the management to evaluate the state of local tissue market, assess the risks and adopt a strategy that fits the ongoing conflict situation in the country.

"We lost about one million customers in Crimea and three million in the Donetsk/Lugansk region, and we lost export sales to Russia which was quite a significant part of our mill's output. So we decided to gradually replace lost sales in Russia, Crimea and the conflict zones in the East with the active increase of exporting to Europe. At the same time we aim our sales efforts on the local market in premium and middle plus segments. Devaluation of hryvnia and, therefore, increased prices for imports turned consumers to domestic producers. We offer the same quality product at lower prices in these segments – it helps us to capture the market share from importers. The low price coreless economy brand Obukhiv65 – which is considered a recycled toilet roll industry standard in Ukraine – is well received in Belarus, Mongolia, Moldova and China," Startsev said.

He adds the introduction of 8 and 16-pack bath tissue is more popular in Europe than in Ukraine, but "we see big pack sales increase every year, especially in the middle plus segment". "Another trend in the Ukrainian tissue market – a growing sales share of private labels (PL) reflecting economic downturn when PLs offer lower price product than brand names. We make

Paper Napkin Suppliers in Ukraine (2015)



PLs for almost all retailers in Ukraine and currently its share in some of our product categories is up 50%."

Startsev signified the mill's difficulties of dealing with currency issues when selling abroad due to recent government regulations: "In the Ukraine, tax policies limit export-import deal settlements to 90 days, while the majority of foreign parties use 120 days in payment term agreements. So instead of dealing directly with customers Ukrainian companies must use a third party associates adding the cost to trade proceedings."

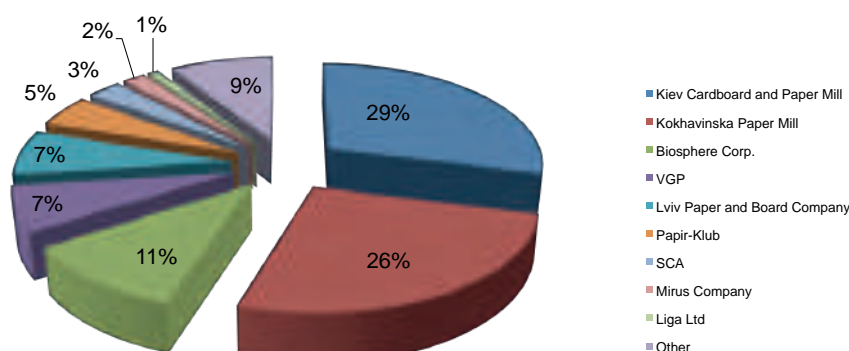
Paper napkins are the other popular and growing tissue segment in the Ukraine, and the sector has its own leader, VGP from Lutsk, which is ISO 9001:2008 and BSCI certified, specialising in 100% soft virgin tissue stock products with its own award winning brand Ruta. With 350 staff, it also specialises in higher quality 2 and 3-ply paper towels, hankies and toilet paper under the brand names Ruta, Fesko, Servetta and Ecolo. VGP buys a variety of high quality virgin parent rolls that fit customer requirements, procuring white and colour jumbos from Sweden, France,

Romania, Poland, Italy and Turkey. The production process is highly automated and operates the industry's benchmarks like Omet, Gambini, Winkler+Dünnebier, TMC, Heino Ilseman and Multipack.

Illia Miretskyi, VGP chief executive and general manager, said: "I consider the time of hardship to be the time of opportunity. 2015 was a very difficult for our country and while our output volume did not change, the hryvnia devaluation laid some toll on our finances. In 2016 the Ukrainian tissue market shows signs of stabilisation and hopefully it will help growth. We managed to increase our production output by 7% in the first half of 2016 proving that our marketing strategy works despite the economic hardship."

Tissue World met Miretskyi in Kiev where we flew from Lutsk, VGP's production site. Miretskyi adds: "We used to have a quite large market in Russia and due to the known events for the last two years we practically lost it. Politics were being involved in good business relationships and spoiled it. So VGP has changed its course to Europe and we now export to 17 countries and this number is growing almost monthly. While we try hard to maintain positions in our traditional market like Belarus, Kazakhstan, Kirgizstan and Moldova, our export managers actively develop new markets such as the Baltic States, Poland, the Netherlands, Germany and even Switzerland. In the Ukraine, VGP distributes its products through all market outlets including local (Silpo, ATB, Epicentr) and international (Metro, Achan, Billa) retailer chains, wholesalers, small groceries, farmers markets and B2B. These days, the price of basic tissue products in the Ukraine is the key marketplace issue – and it should be as low as possible."

Paper Towel Suppliers in Ukraine (2015)



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Argentina: Start-up staff at Celupaper's Papelera Nicaragua mill in Argentina; the new PM will increase production to 50tpd

ARGENTINA

Celupaper increases capacity with PM3 – and plans PM4 in 2017

Celupaper has boosted its capacity with the start up of its Toscotec-supplied PM3.

The new line is installed at Papelera Nicaragua mill, Argentina, and its start-up follows the rebuilding of PM2, which Toscotec carried out in February 2015. It will increase the mill's daily tissue production to 50 tonnes of different grades of high-quality tissue.

Celupaper owner Mario Speranza said: "A new era for Celupaper has just begun. "We want to play an important role in the South American market and our vision is to meet demand with high quality products following the market growth and retaining the customers.

"Now we are waiting for the next Toscotec PM4 that will be started up by the end of 2017."

PM3's delivery included the approach flow system featuring ultimate Toscotec technology TT SAF®, a MODULO tissue machine with single-layer headbox, single press configuration and TT SYD-2500MM featuring TT Milltech-MYH

(monosystem gas heated hood).

The supply also comprised an electrification and controls package, and a steam and condensate system.

VENEZUELA

K-C suspends all its operations as national crisis deepens

Kimberly-Clark (K-C) has indefinitely suspended operations in Venezuela after it said it was "impossible" to manufacture there due to the country's economic crisis.

The tissue giant said the move was in response to the "continued deterioration of the economic conditions in the country".

All operations at the company's office in Caracas, along with its mill and distribution centre in Maracay have been indefinitely suspended and K-C will no longer manufacture, market or sell its line of consumer goods and professional products in Venezuela while the suspension is in place.

The decision was made following years of a "lack of raw materials", which in the last two months had caused the majority of its manufacturing lines to shut down,

as well as the lack of availability of foreign exchange and soaring inflation.

"The combination of these factors make operating the company's business impossible at this time," the company added.

Kimberly-Clark (K-C) has indefinitely suspended operations in Venezuela after it said it was "impossible" to manufacture there due to the country's economic crisis.

"K-C remains concerned for the safety of its former employees in Venezuela and if the Venezuelan government takes control of Kimberly-Clark facilities and operations, it will be responsible for the well-being of the workers and the physical assets, equipment and machinery in the facilities going forward." If conditions change, K-C said it will review its options regarding the viability of operating in Venezuela. It added that it remains committed to growing its remaining business in Latin America.



Above: Sofidel chief executive Luigi Lazzareschi (fourth from left) and colleagues break ground at the company's new \$300m tissue paper mill and converting plant in Circleville

AMERICA

Sofidel breaks ground on \$300m Ohio plant

Sofidel has broken ground at its \$300m tissue paper mill and converting plant in Circleville, USA.

The move will significantly increase the Italian company's production capacity in the States, with the site's products being sold into the Midwest marketplace.

Chief executive Luigi Lazzareschi said: "We celebrate the commencement of construction of the first Sofidel integrated paper mill to be built from the ground up in the United States. It's going to be a very big project for us."

American president Barack Obama has also mentioned Sofidel in reference to its investment in Ohio.

Obama said: "At last year's summit an Italian tissue company started a conversation with folks from central Ohio and next month they are breaking

ground in the town of Circleville on a manufacturing facility that will create hundreds of jobs in a part of the American Midwest that needs them.

"It will be the largest private sector investment in Circleville in decades and it started right here at SelectUSA".

Sofidel has also recently set up a new office in Philadelphia (PA) on the East Coast, one of the most densely populated areas in the country which will serve as the new headquarters of its subsidiary Sofidel America.

At the end of 2015, Sofidel America strengthened its position in the US with the acquisition from Green Bay Converting of a converting plant with its corresponding business in Green Bay (WI), a new state of the art converting building in Hattiesburg (MS), launching the new greenfield investment in Ohio, and opening a new head office in Philadelphia.

It has also opened a new production plant in Tulsa (OK) producing AfH and

consumer private label products.

Lazzareschi added: "The US market is a key market for our group because it is the first in the world in terms of per capita consumption in the tissue sector.

"With the recent investments we are creating the necessary conditions to further increase our service levels and enhance the added value that we offer our customers."

Sofidel is now active in seven states; Nevada (Henderson), Oklahoma (Tulsa), Wisconsin (Green Bay), Mississippi (Hattiesburg), Ohio (Circleville), Florida (Haines City), and Pennsylvania (Philadelphia).

US upholds anti-dumping duties on certain tissue products from China

The US International Trade Commission (ITC) unanimously voted earlier this month to extend anti-dumping duties (ADD) on imports of certain tissue products from China.

As a result of the Commission's affirmative determination, an existing 112.64% ADD on Chinese imports of the products in question will remain in place.

Sofidel has also recently set up a new office in Philadelphia (PA) on the East Coast, one of the most densely populated areas in the country which will serve as the new headquarters of its subsidiary Sofidel America.

The US Department of Commerce (DOC) issued the initial ADD order in March of 2005 after its investigations found that 12 producers and exporters had sold certain tissue products from China in the US market at less than their fair value, with a margin of 112.64%.

According to the ITC, a revocation of the ADD order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."

The decision was taken after the second five-year sunset review of the order, which started last June.

The US Department of Commerce (DOC) issued the initial ADD order in March of 2005 after its investigations found that 12 producers and exporters had sold certain tissue products from China in the US market at less than their fair value, with a margin of 112.64%.

The goods in question are cut-to-length sheets of tissue paper having a basis weight not exceeding 29g/m² and a width no less than 0.5 inches (1.27cm).

Tissue capacity in China has expanded so rapidly in the past several years that the domestic market is unable to absorb the growing supply.

Producers have been seeking ways to ship their wares overseas, including to the USA, despite the ADD order.

Over the past ten years, the DOC has slapped punitive tariffs of 112.64% on tissue products imported from Vietnam Quijiang Paper and from Thailand's Sunlake Décor.

The two firms were found circumventing the ADD order by converting China-origin jumbo rolls and exporting finished products to the USA.

News from www.risiinfo.com

Resolute files lawsuit against Greenpeace's 'Forest Destroyer' campaign

Resolute Forest Products has filed a federal lawsuit against Greenpeace International, Greenpeace USA, Greenpeace Fund, STAND (formerly ForestEthics) and a number of their associates.

The producer made the claim on 31 May in the United States District Court for the Southern District of Georgia.

The complaint included federal racketeering claims and racketeering, trademark, defamation and tortious interference claims under Georgia law. Resolute said: "These alleged claims arise from Greenpeace's self-described 'Resolute: Forest Destroyer' campaign falsely accusing Resolute of: (a) 'destroying endangered forests,' and 'operating and sourcing wood...

benefits for these peoples through shared economic participation in the forestry business.

"The complaint also details how, to support its false accusations, Greenpeace has fabricated evidence and events, including, for example, staged photos falsely purporting to show Resolute logging in prohibited areas and as having harvested areas that were actually impacted by fire."

Richard Garneau, Resolute's president and chief executive, said: "Our company

"The complaint explains that far from being a 'forest destroyer,' Resolute has planted well over a billion trees in the Boreal – which is a billion more than Greenpeace – and is responsible for virtually no permanent lost forest acreage."

in violation of law";(b) causing the "destruction of endangered species" and "critical caribou habitat" and risking a "Caribou Herd Death Spiral," "extirpation" and "extinction";(c) "abandoning" and "impoverishing" the Boreal's indigenous communities; and (d) impairing the Boreal's ability to mitigate climate change.

"The complaint describes in detail the falsity of these and other malicious and defamatory accusations.

"Among other things, the complaint explains that far from being a 'forest destroyer,' Resolute has planted well over a billion trees in the Boreal – which is a billion more than Greenpeace – and is responsible for virtually no permanent lost forest acreage."

The complaint also seeks to demonstrate that Resolute also has not impaired the Boreal's ability to absorb greenhouse gases, and, instead, has improved that ability through harvesting and forestation as recognised and encouraged by the U.N. Intergovernmental Panel on Climate Change.

Resolute added: "Nor has Resolute abandoned, exploited or impoverished First Nations or other communities within the Boreal forest, but instead – and again unlike Greenpeace – has created and sustained substantial

strives for the highest standards of environmental stewardship, which is why the attacks on us are so obviously cynical and thoroughly irresponsible.

"We have an obligation to our business ethics, and our many shareholders, customers, partners and stakeholders to draw the line after all other means have been exhausted."

Resolute is seeking compensatory damages in an amount to be proven at trial as well as treble and punitive damages.

Resolute Forest Products produces pulp, tissue, wood products, newsprint and specialty papers.

The company owns or operates over 40 pulp, paper, tissue and wood products facilities in the United States, Canada and South Korea, as well as power generation assets in Canada and the United States.

A spokesperson for Greenpeace said: "Resolute's lawsuit is a SLAPP (strategic lawsuit against public participation) suit with no merit, designed to silence their critics and allow them to continue operating with a lack of transparency and accountability to the public.

"Greenpeace has a long and respected history of working with the forest industry to improve their sustainability practices and in the process making them market leaders.

"It is our job as an advocacy organisation to share independent science-based information with the public and to push companies like Resolute to adopt policies that value these precious ecosystems and the well-being of First Nations above profit."



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Cascades targets American west coast with tissue investment

Cascades is to invest US\$64m in constructing a tissue converting plant for the American AfH market. Located in Scappoose, Oregon, the investment includes new state-of-the-art converting lines that are scheduled for commissioning at the end of the first quarter of 2017.

It will manufacture virgin and recycled bathroom tissue products and paper hand towels for the AfH market.

Some 200 jobs during the construction phase will be created and 80 staff will be employed once the work is finished.

The unit will be supplied by the Cascades tissue paper plant located 12 kilometres away in St. Helens. Its production capacity will be close to six million cases per year, or approximately 53,000 tonnes of finished product.

Jean Jobin, president and chief operating officer of Cascades Tissue Group, said: "This major investment consolidates our presence in Oregon and on the West Coast and allows us to take another important step toward achieving our objective of expanding into key markets in the southern and western United States.

"This new plant will be equipped with some of the most modern assets in the industry, which will help us win additional market share.

"It will also allow us to increase our integration rate and offer ever greater quality and flexibility."

Construction will begin once the municipal permit process has been completed.

Cascades Tissue Group, a division of Cascades Canada, is the fourth largest tissue paper manufacturer in North America.

Founded in 1964, it produces, converts and markets packaging and tissue products that are composed mainly of recycled fibres.

SERBIA

Drenik boosts capacity with rebuild

Tissue manufacturer Drenik is to increase the production capacity of its Belgrade-based facilities after it placed an order with supplier Recard to rebuild PM1.

The move will boost the machine's maximum speed of 800m/min to 1,300m/min, while its production capacity will

increase from 40tpd to 70tpd.

Delivery is scheduled for September 2016 and the start-up for the end of November.

Recard supplied the company with PM1 in 2004 and returned for a second order in 2007 to deliver PM2, another turnkey plant inclusive of a tissue machine running at the working speed of 1,850m/min and with a production capacity of 120tpd.

At its Belgrade facilities, the Serbian company produces about 43,000 tonnes of tissue per year using exclusively the two Recard machines.

Drenik was founded in 1996 and is headquartered in Belgrade where its facility extends for 30,000m² across seven hectares of land.

It produces its own line of tissue products for the Perfex and Boni brands and it is also a supplier for other brands.

It sells into the Serbian market and Balkan region (Montenegro, Macedonia, Bosnia and Croatia), and also exports in Eastern Europe to countries such as Romania, Slovenia, Bulgaria and Hungary, where it has recently purchased a paper mill.

JAPAN

Daio Paper to make tissue products at Kawano mill in Japan

Japan's Daio Paper has announced a plan to restart operations at its inactive Kawano mill in the Ehime prefecture.

The site, which is near Daio's huge Mishima mill, will benefit from the latter's pulp production and energy facilities as it produces a projected 4,500 tonnes per month of household paper products.

Output will include tissues, toilet paper, and kitchen paper.

The project is projected to cost about ¥21bn (\$193m).

It is subject to a vote by Daio's board of directors in September.

If approved, it should start up between April 2018 and March 2019.

News from www.risiinfo.com

CHINA

APP halts tissue expansion in China in face of oversupply; continues in Indonesia

While gearing up for the commissioning of a massive 2.8m tpy pulp mill in South

Sumatra, Asia Pulp & Paper (APP) has shifted its tissue paper expansion plans from China to Indonesia.

The giant work site there is nearing completion of two 1.4m tpy bleached hardwood kraft pulp lines, scheduled for start-up in October.

The company envisages building several large tissue paper machines that will have a total capacity of half a million tpy at the plant sometime after the pulp lines come on stream.

A project timeline for the tissue PMs remains to be hammered out.

APP has already been expanding tissue capacity at other mills it owns in Indonesia.

Between late 2014 and early 2015, the company started up two 5.6m-wide machines, each having a capacity of 60,000tpy, at its pulp and paper mill in Perawang, Riau, Sumatra.

The two units were supplied by A Celli and have taken the number of tissue machines at the site to 20, with a combined capacity of 664,000tpy.

It is the largest tissue facility in the country.

China halt: The firm has decided to bring a close to its tissue expansion in China due to overcapacity.

Two 60,000tpy A Celli machines initially destined for China were subsequently redirected to Indonesia, according to APP sources and the Italian supplier.

One of them was erected at the company's Jambi mill in Sumatra and the other went to the Karawang plant in West Java. The two units came online earlier this year.

These four new A Celli machines have boosted APP's total tissue capacity in Indonesia from 704,000tpy to 1.064m tpy.

Meanwhile, the company signed up Toscotec for a large deal that is intended to supply several large tissue machines. According to the manufacturer, two such units are being shipped to Indonesia for the Perawang plant.

Each of them will feature a steam hood and a 22-foot Steel Yankee dryer, with a design speed of 2,000m/min and a daily capacity of 192 tonnes.

Installation work for one is expected to kick off next month, with its start-up scheduled for the end of this year.

The other unit is slated to come on stream soon after the first PM is commissioned.

Once online they will be the world's largest tissue machines.

News from www.risiinfo.com



Above: The model AC882 rewinders will have a paper width of 5,620mm and a speed of 1,000 metres per minute.

Lee & Man Paper boosts capacity with rewinders buy – delivery end of 2016

Lee & Man Paper Manufacturing has ordered four tissue rewinders to be supplied by A.Celli Paper.

The model AC882 rewinders will have a paper width of 5,620mm and a speed of 1,000 metres per minute.

Two are designated for the company's Jiangxi Jiujiang facility, while the other two for the Dongguan Guangdong plant. All are scheduled to be delivered at the end of the year.

Lee & Man Paper was founded in 1994 and now has five facilities in China and some factories in Vietnam.

Despite being a latecomer to the Chinese tissue paper industry, the company now aims to become one of its top producers, targeting a total capacity of over half a million tpy of the grade.

Weifang Hicredit Machinery to supply two PMs to tissue mills in Baoding

Two small mills in Baoding city, Hebei province, recently ordered 15,000tpy tissue machines from Weifang Hicredit Machinery.

A spokesperson from the Shandong-based supplier said the PMs, each having a trim width of 3.5m and a design speed of 900m/min, are scheduled to come online at Baoding Lifa Paper and Baoding Zhongxin Paper in the first half of 2017.

The companies previously each ordered an identical PM from Weifang Hicredit. They are currently being installed at the Baoding mills and are set to start up by the end of this quarter.

Meanwhile, another tissue producer in the city, Baoding Yusen Paper, is

gearing up to start trial runs on a 13,000tpy Weifang Hicredit PM this month, followed by an identical unit in October.

The six projects are part of a wave of tissue capacity expansions in Baoding, a hub for small tissue mills with a combined capacity of more than one million tpy.

The local government has been implementing stricter environmental standards to combat water and air pollution.

Therefore, mills are investing in new PMs to replace old ones in order to cut emissions.

News from www.risiinfo.com

The six projects are part of a wave of tissue capacity expansions in Baoding, a hub for small tissue mills with a combined capacity of more than one million tpy.



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On the occasion of the 50th Anniversary of its foundation, Sofidel, being in line with the sustainable development objectives, announces and presents the first edition of the **"Sofidel Suppliers Sustainability Award"**. This will take place on next 24th of November. The award is a yearly acknowledgement to promote the best practices and improvement actions on social and environmental responsibility, carried out by Sofidel Group Suppliers. It is addressed to the Group Supplier Companies that stand out for their sustainability standards in responsibly managing the whole value chain, and is focused on the "TenP – Sustainable Supply Chain Self-Assessment Platform" project. More details can be found in the participation announcement on the "Sofidel Suppliers Sustainability Award" online page. www.sofidel.com/en/sofidel-suppliers-sustainability-award. We hope that our same commitment for the future of everyone will be shared by many of you. Thank you for your contribution and cooperation.

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Henan Yinge may change ownership

Henan Yinge Industrial Investment announced that a plan to put its principal shareholder's stake up for sale has been approved by local authorities.

The statement sent the Shanghai-listed company's share price spiking by the daily limit of 10% for the following two days, before the Chinese stock markets closed for the three-day Dragon Boat Festival holiday (June 9 to 11).

Based in Luohe city, Henan province, Henan Yinge has long been a major regional pulp and paper (P&P) producer.

Its principal shareholder, which holds 47.35% of its total shares, is Luohe Yinge Group, a wholly owned subsidiary of the state-owned Henan Energy and Chemical Industry Group (HNEC).

HNEC has been mulling over selling up its stakes in the subsidiary, and now has been permitted to do so by the provincial government.

The pending sale will be in the form of a public transfer and is still subject to approval from the national government.

The value of the deal has not been announced. Nor has any information about potential buyers.

The takeover, if it goes ahead, will profoundly change the ownership of Henan Yinge and put a question mark over the future of the company's assets and employees.

According to its 2015 annual report, Henan Yinge has a total of 3,270 employees.

The company currently operates several production sites in Henan and

Sichuan provinces, with a combined capacity of around 700,000 tonnes/yr of various P&P grades (mainly tissue and recycled containerboard).

The proposed sale comes as the Chinese government is pledging to enhance the ongoing reform of state-owned enterprises (SOE).

In this overhaul, mixed-ownership, openness to private capital, mergers and acquisitions are being encouraged in order to revitalize SOEs, especially those hit hard by overcapacity situations.

Henan Yinge has been struggling in recent years due to intense competition in the P&P industry coupled with a slowdown in the general economy.

The company tried to tackle sectoral challenges by various means, such as entering into the tissue and dissolving pulp segments and shutting down old printing and writing (P&W) paper facilities.

These endeavours, however, did not turn the tide.

In October 2014, almost 1,000 workers went onto the streets protesting the company's repositioning scheme for redundant personnel, after production stopped at a 220,000 tonne/yr P&W paper mill in Luohe city.

Henan Yinge reported huge losses in 2013 and 2014.

It achieved a net profit of RMB 46.8 million (\$7 million) in 2015 after receiving a total of RMB 211.8 million in government subsidies.

But it returned to the red in the first quarter of 2016, posting a net loss of RMB 43.5 million.

News from www.risiinfo.com

China Environment State Investment cancels Sichuan Yibin Paper purchase; tissue project delayed

Sichuan Yibin Paper has announced that the planned transfer of a majority stake in it to an environmental protection company has been cancelled.

The move comes after security regulator China Securities Regulatory Commission (CSRC) tightened regulations on back-door listings last month.

In November 2015, the stated-owned firm China Environment State Investment entered into an agreement with Yibin

State Assets Management and Yibin Wuliangye Group, Shanghai-listed Yibin Paper's two largest shareholders, to acquire their cumulative 53.83% stake.

China Environment State Investment, as the presumptive majority shareholder, also proposed that Yibin Paper would raise up to RMB 900 million (\$135 million) via non-public share offerings to buy new assets in order to diversify into the environmental protection industry.

However, on 17 June this year, the CSRC revised the rules for major asset restructuring by listed companies.

It banned them from raising funds for asset restructuring, so as to better regulate back-door listings and curb

the sometimes feverish speculation surrounding shell companies.

Back-door listings, or reverse mergers, allow a private company to acquire a public shell company so that it can bypass the lengthy and complicated process of going public on a stock exchange.

In the meantime, the Chinese securities watchdog also launched an investigation against Industrial Securities, the underwriter for Yibin Paper's asset restructuring plan, after allegations one of its clients fabricated financial information in its application for an initial public offering.

By the end of June, shortly after the announcement of the revised regulations and the launch of the probe, Yibin Paper announced that both the share transfer agreement and the asset restructuring proposal had been terminated.

China Environment State Investment's primary reason for the cancellation was that the asset restructuring plan for Yibin Paper, which it saw as essential for improving the company's performance, is unlikely to be carried out under the new rules.

Tissue machines delayed: Founded in 1944, Yibin Paper has long been a significant pulp and paper producer in southwestern China.

It shut down its sole mill in Yibin city, Sichuan province in 2011 and retired a combined capacity of around 200,000tpy of newsprint, food packaging board, and printing and writing paper.

The company moved to erect a 350,000tpy cartonboard PM and a 200,000tpy bamboo pulp line at a greenfield mill around 30km away, and also mapped out a plan to add 100,000tpy of tissue capacity at the new site.

A lack of funds, however, delayed the relocation project. The new PM and pulp line, which were originally planned to start up in 2012, did not come on stream until 2015.

A contact from Yibin Paper told PPI Asia that the acquisition deal falling through did not affect the operation of the established machinery.

Currently all the output of the bamboo pulp line goes to the PM, which produces food packaging board at an average pace of 18,000 tonnes per month. Still, the tissue project will have to be postponed.

So far no order has been placed for any tissue unit as the firm is once more experiencing funding shortages, said the contact.

News from www.risiinfo.com

MEXICO

Papel San Francisco to boost capacity with second PM

Papel San Francisco has signed up Valmet to supply a repeat order for an Advantage DCT 100TS tissue production line.

It will be installed at the company's mill in Mexicali and start-up is planned for the second half of 2017. The value of the order was not disclosed.

The move is in response to an increase in customer demand for standard tissue products.

The new tissue machine will have a width of 2.8m and a design speed of 2,200m/min and will add 30,000 tonnes of tissue paper per year to Papel San Francisco's current production of toilet tissue, kitchen towels and napkins.

Valmet's scope of delivery will comprise an Advantage DCT 100TS tissue machine. It will be equipped with OptiFlo headbox and cast alloy Yankee cylinder.

Dario Palma y Meza Espinoza, operational director, Papel San Francisco, said: "The machines are operating at high speed and made the world speed record of 2,160m/min in 2009.

"Due to the need to increase our capacity of standard tissue we decided to go for the cost and energy efficient Advantage DCT technology equipped with the Advantage ViscoNip press."

ITALY

Tissue World Milan 2017 rescheduled to April 10-12

Tissue World has announced the change of event dates for Tissue World Milan 2017 to 10-12 April 2017.

The change of event dates takes place in combination with a change of exhibit hall to accommodate the increasing demand for exhibit space.

With this newly booked and larger hall, all exhibits will be accommodated in the same hall, on the same level.

The event will now be held at: Fieramilanocity, Hall 3 | 10-12 April 2017

The flagship event Tissue World, which started in Nice in 1993, is the only show exclusively dedicated to the tissue business.

For the first time, Tissue World will be held in Milan, Italy, and this move has received strong support from the entire industry.

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and Sao Paulo, Tissue World offers an integrated and intertwined platform consisting of exhibitions, conferences and a magazine providing an unmatched offline and online meeting place to do business, exchange ideas and learn all year round.

For more information, please visit www.tissueworld.com/Milan

SPAIN

Competition authority slaps fines of Euro 128.8 million on heavy inco cartel

The Spanish National Market and Competition Commission, Comisión Nacional de los Mercados y la Competencia (CNMC), has imposed fines of Euro 128.8 million (\$142.6 million) on seven manufacturers of absorbent adult incontinence products and the Spanish Federation of Healthcare Technology Companies, Federación Española de Empresas de Tecnología Sanitaria (FENIN), for the single and continuous infringement of competition laws.

The competition watchdog considers it proven that Arbora & Ausonia (succeeded by Procter & Gamble Spain), Laboratorios Indas, SCA Hygiene Products, Laboratorios Hartmann, Ontex, Barna Import Médica, Textil Planas Oliveras and Algodones del Bages, with the collaboration of FENIN, reached agreements and fixed selling prices to wholesale distributors of adult incontinence products sold through pharmacies from at least December 1996 until January 2014, with the duration of the anti-competitive behavior varying from company to company.

The CNMC said: "With the corresponding prescriptions, diapers for non-hospitalized adults with severe incontinence issues can be obtained directly from pharmacies or through health or social care networks such as health care centres or nursing homes. In both cases the products are financed by social security."

It added that for inpatients, the relevant authorities acquire the products through public tenders, which lowers prices considerably.

The fined cartel practices affected the distribution of heavy inco diapers funded by the National Health Service through the pharmacy channel. These are dispensed on prescription and payment is only assumed in part by the

end user, as the remainder is reimbursed by public administrations.

According to the CNMC, the participating diaper manufacturers reached agreements to fix selling prices to wholesale distributors to pharmacies through a working group created by FENIN.

Moreover, the sanctioned entities reportedly fixed prices and closed agreements through negotiation and consultation with other agents of the distribution chain, such as pharmaceutical councils and associations of wholesale distributors of pharmaceuticals and medical devices, from at least December 1996 until June 2010.

Also, the cartel members used a strategy for bringing up administrative litigation against public tenders launched by the health authorities of different autonomous communities to acquire and deliver incontinence products directly to outpatients, trying to maintain the margins generated by marketing the products through the pharmacy channel, according to the CNMC.

"The scope of punishable conduct in this case is especially significant since the combined market share of the participating entities in the relevant market is 95%. Heavy urinary incontinence is [...] a severe problem that affects some 2.5 million people and has important implications for the health and quality of life of elderly and disabled citizens," the CNMC said in a statement.

The authority imposed the following fines on the cartel members: Euro 68.5 million for Arbora & Ausonia and its successor Procter & Gamble España, Euro 35.1 million for SCA Hygiene Products, Euro 13.2 million for Laboratorios Indas, Euro 5.1 million for Ontex Peninsular, Euro 4 million for Laboratorios Hartmann, Euro 1.4 million for Barna Import Medica, Euro 801,738 for Textil Planas Oliveras, Euro 251,456 for Algodones del Bages and Euro 200,000 for FENIN.

Moreover, and for the first time since its foundation, the CNMC fined legal representatives or people within the governing bodies of the entities involved in anti-competitive behaviour. According to the authority, two representatives of Arbora & Ausonia and Indas will have to pay Euro 15,000 and Euro 4,000, respectively. Also, two directors of FENIN were fined Euro 6,000 and Euro 4,000.

However, Arbora & Ausonia, Procter & Gamble and the management of Arbora

& Ausonia are exempt from the payment of the fines as they blew the whistle in June 2013.

Cartel members to appeal: Following the CNMC decision, several members of the alleged inco cartel announced plans to appeal the judgement.

"SCA does not agree with the CNMC's decision and will submit an appeal to the Spanish courts," the Swedish group said in a statement. Ontex also announced that it will explore all appeal possibilities.

"Ontex is committed to carry out its business activities in full compliance with all applicable laws and conducts a company-wide compliance program to that effect," the Belgian group said.

FENIN issued a statement saying that it has not participated in any cartel nor has the ability to determine the dispensing and distribution routes of absorbent incontinence products.

"The Ministry of Health, social services as well as the departments of health of the autonomous communities promoted and signed agreements with all agents

of the pharmaceutical chain that now are considered to have broken competition laws. FENIN will appeal the decision of the CNMC before the National Court as it believes it has acted in accordance with the law," the association said, adding that it will continue to work with the authorities and hopes that the case is resolved satisfactorily.

The remaining alleged cartel members could not be reached for comment.

News from www.risiinfo.com

SCA to close tissue production plant

SCA will close its tissue production plant in Sant Joan de Mediona.

The site has an annual capacity of 45,000 tonnes and production was expected to be discontinued in July.

An SCA spokesperson said: "The closing affects 69 employees. The consultation process with the workers representatives has ended in a positive way for both sides.

"The company offers relocation to the impacted workers who have the opportunity to choose between going to our mills in Allo (Navarre) and Valls (Tarragona), the two primary mills of SCA in Spain, or redundancy payment."

The tissue giant said its decision is aligned with its strategy to "optimise its geographic production footprint in order to drive cost and capital efficiency and further increase value creation in tissue".

It said: "SCA remains fully committed to the Spanish market, which is the group's sixth largest market based on sales in 2015."

The restructuring costs for the closure of the production plant are expected to amount to approximately SEK230m and will be recognised as an item affecting comparability in the second quarter of 2016.

Of the restructuring costs, approximately SEK 140m is expected to be recognized as an impairment loss.

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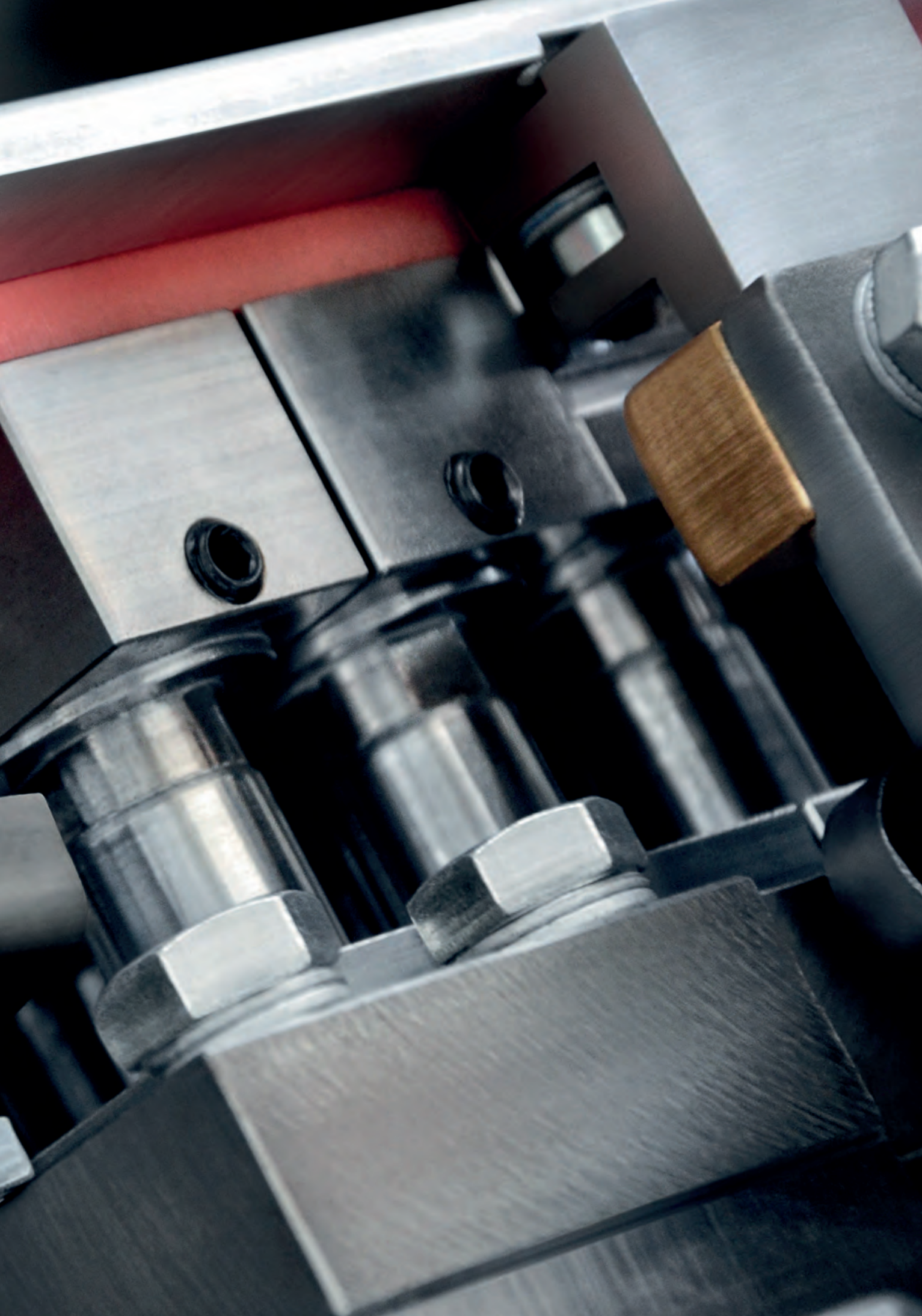
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Iran – regional leader following recent investment

C F

Bill Burns

Senior consultant,
Fisher International

The Middle East region (Egypt and Turkey not included) is a minor contributor to worldwide pulp and paper production. As figure 1 indicates, Asia Pacific is the largest contributor at 43% followed by Europe and North America at 25% and 21% respectively while the Middle East is the smallest contributor by far at 1% of the world's pulp and paper capacity. The grade breakdown within the Middle East is dominated by packaging production at 66% of the mix followed by towel and tissue (T&T) production representing 22% of the region's capacity (Figure 2).

Iran, with a population of about 80 million, ranks first among the Middle East's T&T producing countries with 27% share of total production (Figure 3). Saudi Arabia, with less than half of Iran's population is second at 19% followed by the United Arab Emirates with 14% capacity share. Despite crippling UN trade sanctions imposed over the past ten years (certain elements of which were relaxed following a nuclear accord in January 2016), Iran achieved its leadership position in relatively short order over the past three years with growth that dramatically outpaced other Middle Eastern countries (Figure 4). As the capacity trend analysis in Figure 5 reveals, Iranian T&T capacity experienced a cumulative average growth rate (CAGR) of more than 29% for the period 2007 to 2016 while other countries in the region saw significantly lower growth rates or, in two cases, even negative CAGR.

Iran's seven T&T sites are all single-machine mills each owned by a different company (Figure 6). Six of the seven sites are clustered around the capital city of Tehran and its greater metropolitan population of 16 million. Single-machine

Global Pulp and Paper Market Share by Region

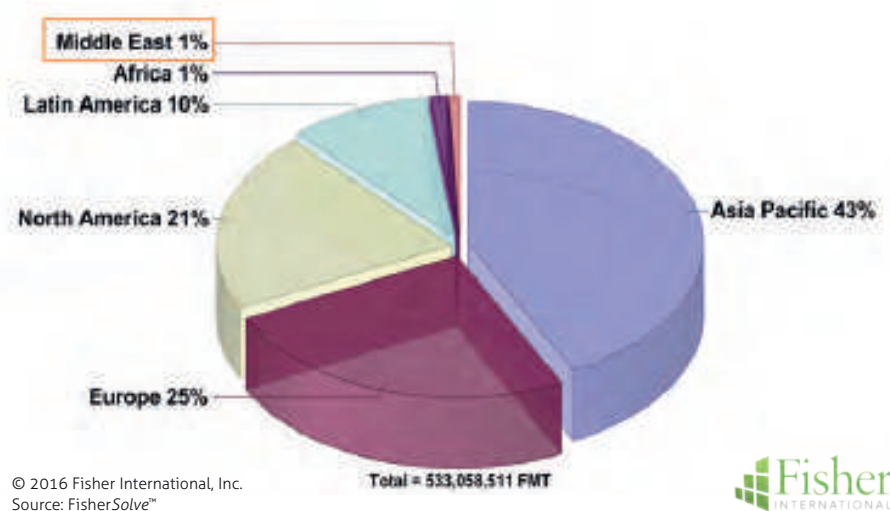


Figure 1 Global Pulp and Paper Market Share by Region

Middle East Major Grade Market Share

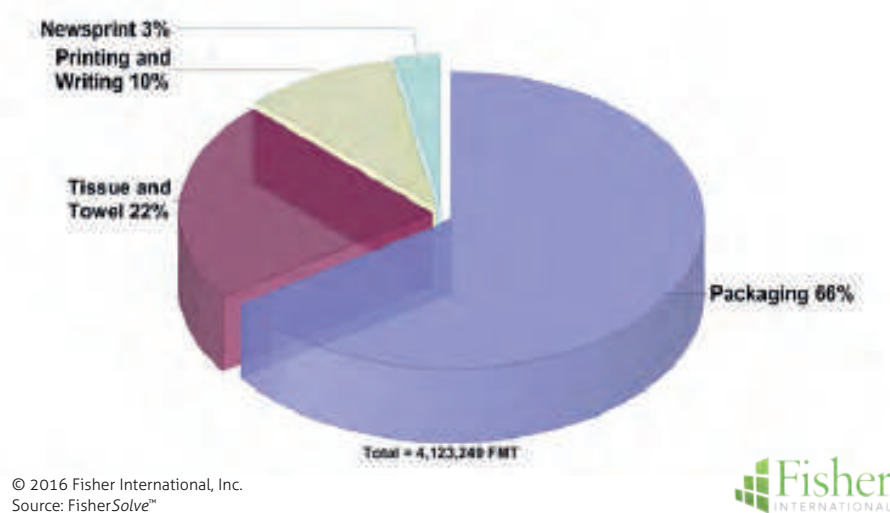


Figure 2 Middle East Major Grade Market Share

mills are not uncommon in the Middle East; those in Jordan and Kuwait are similarly configured (warranted by those countries' smaller populations and geographic size). Indeed, such sites are suited to areas where the market is predominately local. The proximity of Iranian mills to each other (six of the seven mills are within 100km of each other - see map) is indicative of

this pattern. An interesting question for the future is whether growth will continue with new small sites or expansion of existing sites with additional machines.

Fibre availability does not appear to be a driving force behind either the size of mill or its location. The fibre base in Iran is primarily purchased kraft pulp with a

modest amount of recycled fibre. Relative to other Middle Eastern countries, this fibre mix is common. However, the percent of recycled in the mix is low compared to the other recycled-using mills (Figure 7).

Of the seven separately owned T&T mills in Iran all but one are Iranian; the one exception being Turkish (Figure 9).

The technical age and actual age of Iran's T&T machines are essentially the same given that the machines are all mostly new installations. Trims and speeds represent a base of effective machines with competitive speed capabilities and respectable trim for regional markets (Figure 8). Productivity, measured on a metric tonne per day per cm basis, is similar for both old and new narrow machines and slightly higher (at a rate of .34 MTPD/cm) for the wider, faster machines.

Iranian T&T has a solid competitive cost position within the Middle East being, on average, less than \$75 per FMT above the region's low-cost producer, Saudi Arabia (Figure 10). Fibre strategy and energy are the key differentiating cost drivers in the Middle East. Mills with high use of secondary have a cost advantage over those using high percentages of purchased virgin fibre. Iran's disadvantage to Saudi Arabia comes, in large part, from its mix of about 80% virgin fibre versus less than 50% in Saudi Arabia. Energy cost varies significantly. Iran has an excellent energy profile compared to other Middle Eastern countries. Iran also has a good labour cost position compared to other countries. With labour costs at \$39 per FMT, Iran is competitive with other low-cost countries and significantly lower than the high-cost counties.

Carbon emission is often considered, along with cost, as an indicator of potential future capital and operating mitigation costs that could impact overall cost position. Iran is the lowest emitter in the Middle East at 1.47 MT CO₂ equivalents (Figure 11). Although lowest among its peers in the Middle East, this level is high-second-quartile worldwide and just slightly off the worldwide average of 1.57 MT CO₂ equivalents. Purchased electricity accounts for a large portion of Iran's emissions and its GHG position on the worldwide stage.

The source for market data and analysis in this article is FisherSolve™. Data tables behind Figures 1 - 11 can be obtained from Fisher International. E-mail requests to info@fisheri.com.

Middle East T&T Market Share by Country

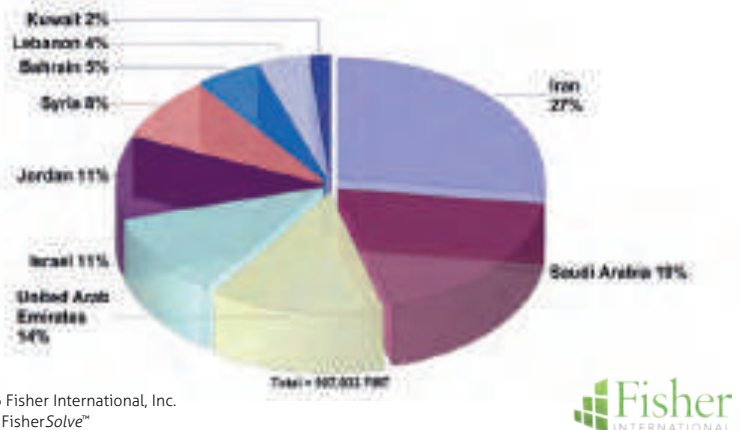


Figure 3 Middle East T&T Market Share by Country

Middle East T&T Growth Trend

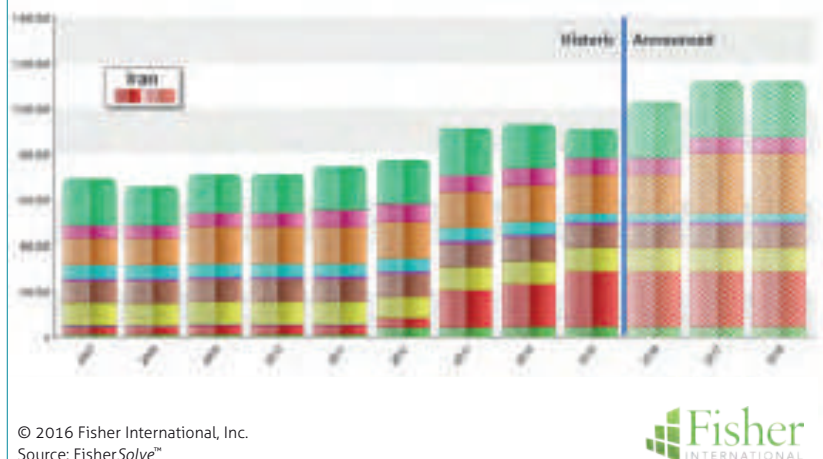


Figure 4 Middle East T&T Growth Trend

Iranian T&T Growth Trend

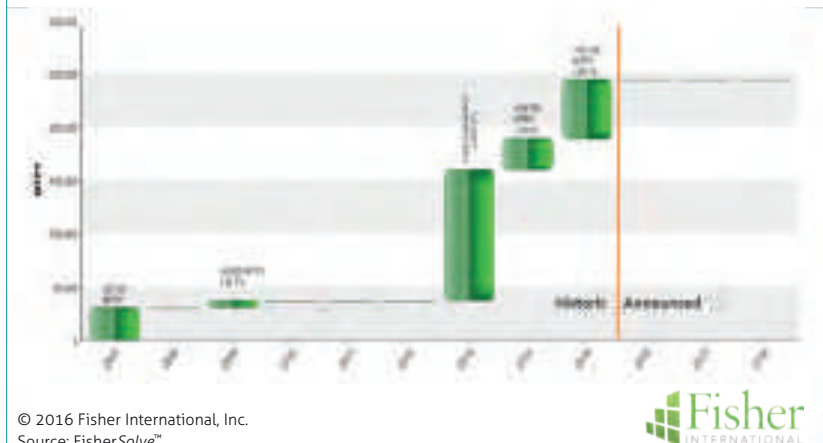


Figure 5 Iranian T&T Growth Trend

Middle East T&T Mill and Machine Distribution by Country

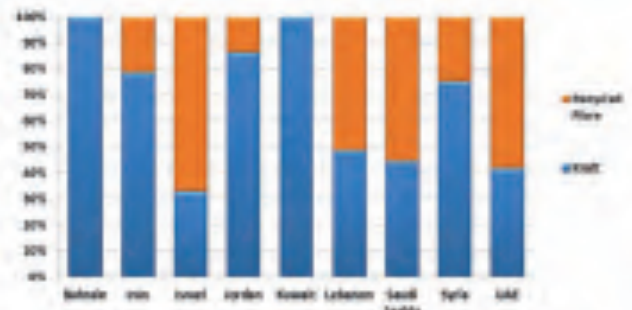


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Figure 6 Middle East T&T Mill and Machine Distribution by Country

Middle East T&T Fibre Base



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Figure 7 Middle East T&T Fibre Base

Iranian T&T Paper Machine Age and Size Metrics by Year Installed

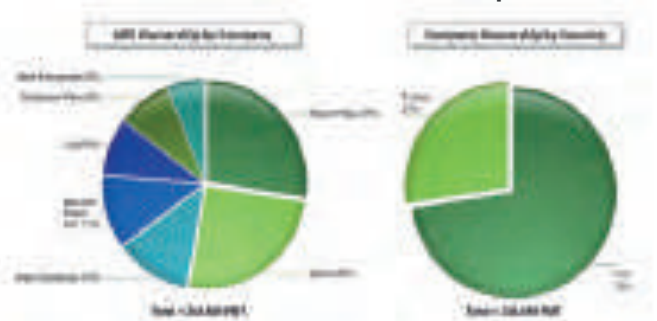
Year Installed	Average Machine Age	Average Fiber Capacity (TPD)	Average Fiber Width (mm)	Average TPD per Fiber Width (MT/ton)
1980 - 1989	11.88	1,308	871	8.38
No Assets from 1990 - 2011				
2012 - 2013	9.14	1,006	955	8.34
2014 - 2015	1.88	1,643	981	8.28

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Figure 8 Iranian T&T Paper Machine Age and Size - Metrics by Year Installed

Iranian T&T Mill Ownership

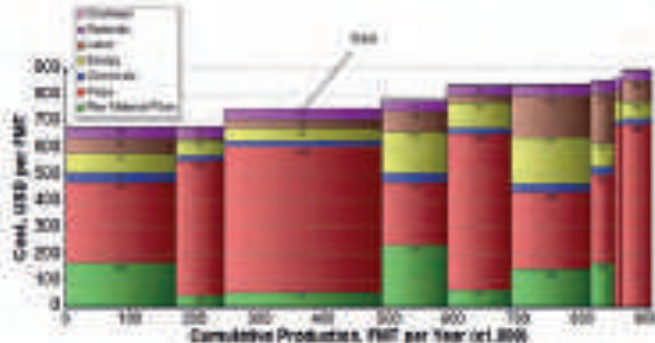


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Figure 9 Iranian T&T Mill Ownership

Middle East T&T Cumulative Cost Curve

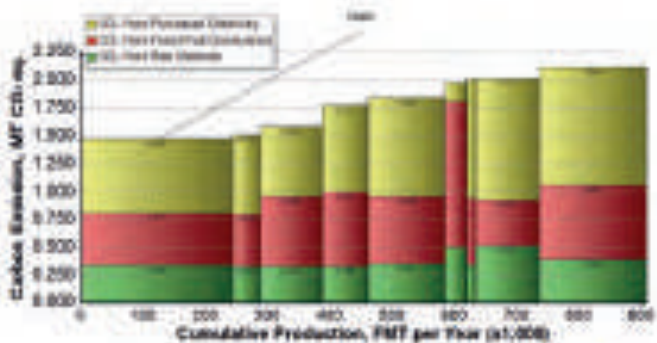


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Figure 10 Middle East T&T Cumulative Cost Curve

Middle East T&T Carbon Emission Curve



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Figure 11 Middle East T&T Carbon Emission Curve

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Fisher International supports the pulp and paper industry with business intelligence and strategy consulting. Fisher International's powerful proprietary databases, analysis tools, and expert consultants are indispensable resources to the industry's producers, suppliers, investors, and buyers worldwide.

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Iran: Relaxation of sanctions will increase tissue demand

With the recent mitigation of certain sanctions, the Iranian economy is expected to experience a more stable situation in 2016. Real GDP is expected to grow by 4% in 2016, up from 2% the year before, and the relaxation of certain sanctions has boosted oil production within the country, driving overall growth further. Moreover, it is now easier for companies to invest in and manage their procurement portfolios due to changes in government legislation.

But other factors also bode well for investors. Iran is in the midst of a moderate population boom, with its total population reaching nearly 80 million in 2015, having increased by about 13 million since 2000. In addition, it has a young population, with a median age of 29.6 years in 2015. The young are typically seen to be more progressive in their views and are willing to try new things. As the population increases, many Iranians are also choosing to live in cities. According to the Iranian Statistical Centre, the proportion of the country's households located in urban areas increased to 73% in 2015, up from 68% in 2006, bringing an increase in modern retailing along with it.

The retail tissue market in Iran

As with other consumer goods markets, the retail tissue market is expected to benefit from these positive signs, prompting investment in the market and the appearance of more international

brands. It is expected that as the Iranian market continues to develop, consumer awareness of tissue and hygiene products will also grow, due to increasing hygiene standards and consumer perception of these products. With middle-class consumers gaining higher purchasing power due to a rise in disposable income, tissue products are also becoming part of the daily shopping cart. The market registered 5% growth in volume terms (tonnes) in 2015 over the previous year, and is expected to remain healthy over the coming five years, with a volume CAGR of 6% through 2020.



Ahmed Bakr



Research analyst,
Euromonitor International, Dubai

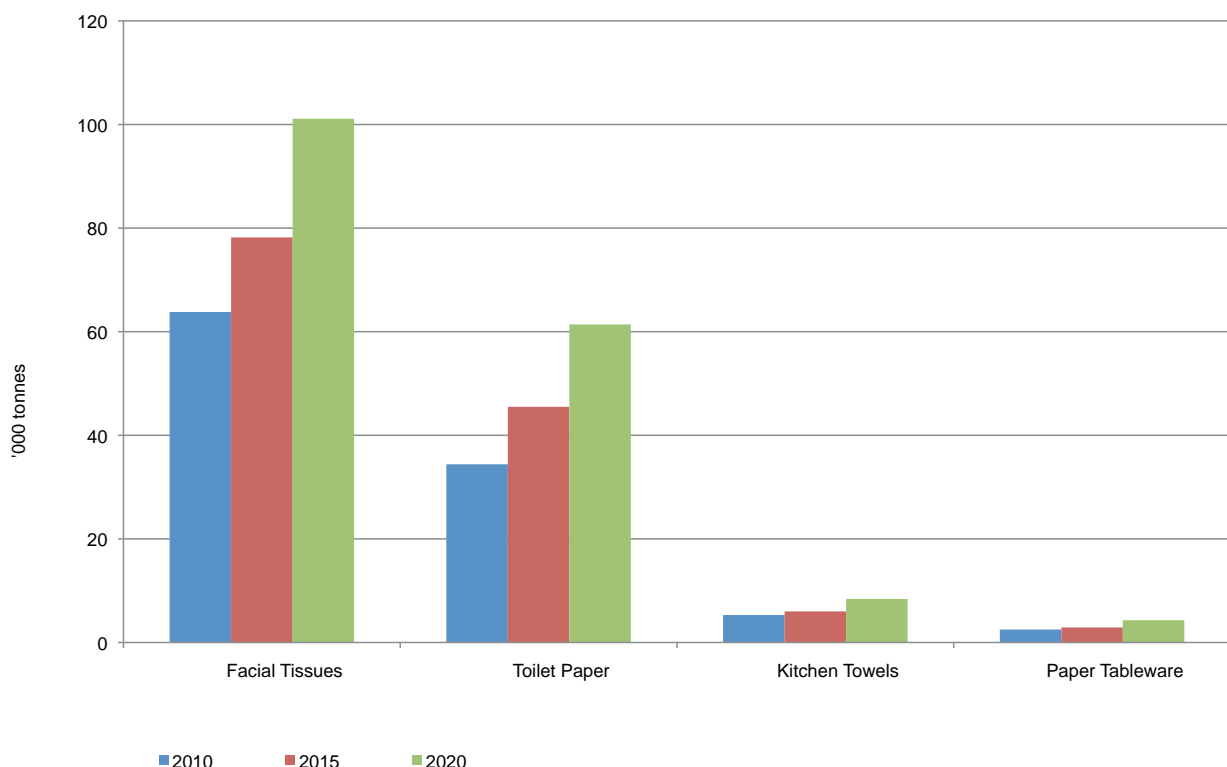


Table: Iran, retail tissue categories, volume, 2010/2015/2020

Some other tissue mills are expected to enter the market by the end of 2016, including, most recently, the paper mill developed by Arian Cellulosa Sanat in Eshtehard, with an estimated capacity of 35,000 tonnes per year.

As a further sign of this growth, Iran has witnessed a wave of investment in this sector over the past few years, including new tissue paper mills and machinery in 2015 and 2016, such as Aryan Cellulose Sanaat's new mill with an estimated capacity of 35,000tpy and new machines at Zarrin Barge Persia and Narmeh Paper Industries. This is causing an expansion in the country's tissue volume. Some other tissue mills are expected to enter the market by the end of 2016, including, most recently, the paper mill developed by Arian Cellulosa Sanat in Eshtehard, with an estimated capacity of 35,000 tonnes per year.

Traditionally, tissue consumption in Iran centred on two main categories: facial tissue and toilet paper. These categories accounted for 59% and 34% of volume sales, respectively, within the retail tissue market in 2015. Price and availability continues to play a crucial role in purchasing decisions. As such, the market for retail tissue in Iran is showing aggressive competition. For example, leading company Pars Crepe Co depends upon its long-standing presence in the country and in-store promotional activities to drive higher volume growth. Equally, as modern retailing gains further ground in the country, companies are making their products available at both independent grocery retailers and hypermarkets/supermarkets. This is creating stronger visibility for tissue products and, along with relatively low unit prices, is stimulating increased demand.

Toilet paper is on a roll

Toilet paper is also experiencing healthy volume growth, reaching 6% in 2015. Traditionally, the most widely found type of toilet in Iran has been the squat toilet, with water typically used for cleaning, not requiring toilet paper. However, due

to urbanisation and greater influence from the West, this tradition has changed over recent years. Flush toilets have increased in popularity, especially within urban and affluent areas, positively affecting sales of toilet paper.

The majority of toilet paper in the market is offered by domestic brands, produced locally. There is very minimal difference when it comes to unit prices among different brands. Promotions and availability are the major factors on which companies compete. Currently, Pars Crepe Co is the leading toilet paper company, with a 27% value share, followed by Khorasan Paper Products Co, on 18%. The rest of the market is divided amongst other domestic players, all of which focus on economy toilet paper. Most consumers prefer buying toilet paper to meet their immediate needs to save money rather than buying bigger pack sizes and paying more – even if in the long

Traditionally, tissue consumption in Iran centred on two main categories: facial tissue and toilet paper. These categories accounted for 59% and 34% of volume sales, respectively, within the retail tissue market in 2015. Price and availability continues to play a crucial role in purchasing decisions.

run these larger pack sizes offer more value for money. Double rolls in flexible plastic packaging is the most common pack size and format in Iran.

Facial tissue also seeing positive growth

Facial tissues also continues to see positive growth in Iran, increasing by 5% in volume terms in 2015. Boxed facial tissues continues to account for the bulk of this category, at around

98%. The improvements in the standard of living, as well as the wider availability of these products in both traditional and modern retailers, continues to drive growth. Moreover, the relatively low unit price for these products makes them a popular purchase.

The increase in distribution has affected other categories within retail tissue as well, for example kitchen towels and napkins. These categories registered the fastest volume growth in 2015, at 7% and 9%, respectively. Growing from a low base, kitchen towels and napkins are now widely available in hypermarkets and supermarkets, making this a major driver of their growth. Iranian consumers, especially those in the middle and upper class, are learning about the multiple benefits of such products.

Innovation and competition to further drive the category

The Iranian retail tissue market is expected to continue its strong performance over the forecast period. It is also expected to see enhanced marketing activities by key players, which will continue to drive

a relatively low unit price. Moreover, further manufacturing investments are expected to raise the country's capacity for producing these products, bringing an increase in availability and competitiveness. As such, key players will shift priorities to invest more in research and development and focus on innovation in order to differentiate their products in the market. New products focusing on quality will also continue to appear, providing a more premium offer for middle- and upper-class consumers.

Outlook for World Tissue Business

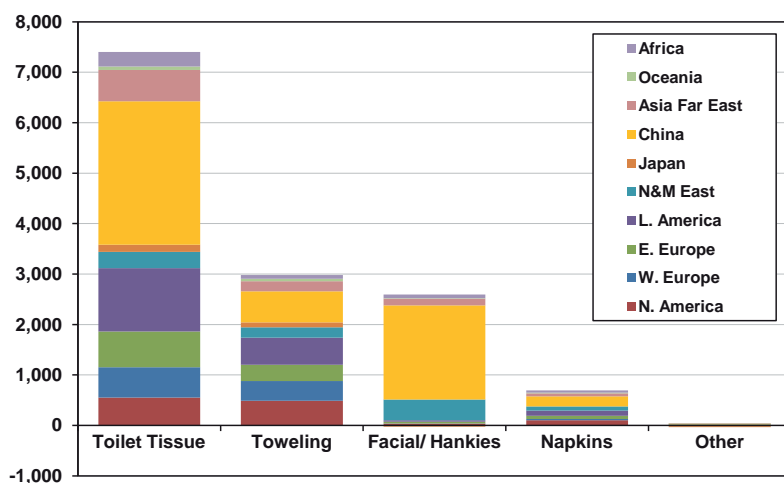
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The most comprehensive, unparalleled, compact data source and forecast for the global tissue market!

RISI's Outlook for World Tissue Business provides insight into recent changes and future growth prospects for the global tissue industry. The study provides details for each key region including key players, supply, demand and operating rates with forecasts up to 2023.

The global tissue industry has experienced strong growth since the global recession. Growth rates have returned to between 3.1-3.9%, after plummeting to 1.2% in 2009, and the global market continues to be in a strong expansion phase. China leads volume growth, followed by North America, Western Europe and Latin America. Over the forecast period, China is expected to continue to export tissue to other regions with a net export surplus growing from 820,000 tonnes annually in 2014 to about 960,000 tonnes by 2018.

Expected Volume Growth in Tissue Markets by Product and Region, 2013-2023
Thousand Tonnes



This study details:

- Driving forces for future demand – broken down by region
- When the tissue business will take – off in countries such as India
- Current and future growth rates and volumes by region
- How world tissue demand will develop – by region and by sector/product
- Global tissue consumption by product and by market segment
- Who the major suppliers and what their strategies are
- The new committed projects by region, and how these will affect operating rates
- The technology and retail trends that will shape the future

PIX Pulp indices 26.7.2016

NBSK pulp Europe

Utipulp statistics show BSKP consumption down by 1.4% from May but up by 2.3% when compared to June last year. Consumer inventories of market softwood pulp at the European paper mills are quite low and almost 7% lower than a year ago.

The re-start of Södra's Värö-mill in mid July brings additional volumes on the supply-side. The weaknesses reported from the Asian markets have not shown much in the European market but the rise of prices has stalled here as well. In fact, our PIX NBSK index moved down, even if by only 17 cents, or by 0.02%, and closed at 812.23 USD/tonne.

With a 0.67% strengthening of the US dollar against the Euro (weekly average of week 29), the index value, after conversion into Euro, moved up fairly clearly, i.e. by 4.76 euros, or by 0.65%, and the July 26 PIX NBSK index value in euro-terms ended at 736.65 EUR/tonne.

BHK pulp Europe

In BHKP, the market remains weaker than in softwood, partly due to increased market BHKP capacity, partly to persistently high producers' stocks and partly by the declines seen in the graphic paper consumption and production which hits hardwood relatively more than softwood.

On the other hand, the demand for market pulp for tissue continues to grow and in these products BHKP represents a higher and still growing share of the total furnish, especially as the declining supply and use of white recovered paper grades is typically replaced by BHKP. After several weeks of weak BHKP pricing in China, the downward pressure has caught up with the European market as well in July, at least temporarily.

"The US packaging sector data was positive as far as box shipments and inventory positions were concerned but the box and containerboard production data was less impressive with an about 1.2% decrease."

Our PIX BHKP benchmark lost more than the NBSKP index as the hardwood index headed down by 4.08 dollars/tonne, or by 0.60%, and ended at 677.25 USD/tonne. In week 28, the value of Euro weakened by 0.67% against the US dollar (weekly average). When converting the USD-value into the

Lars Halén

Senior manager,
FOEX Indexes

Timo Teräs

Managing director,
FOEX Indexes

clearly weaker Euro, the July 26 BHKP benchmark value in Euro headed up by 42 cents, or by 0.07%, and the index in euro-terms closed at 614.23 EUR/tonne.

Paper industry

At the time of writing these notes, the so far released data on the paper industry activity in June has been predominantly disappointing even if for instance the US manufacturing index ISM's sectorial numbers placed printing and related support industries and paper production high on the list on best industry performers.

The US packaging sector data was positive as far as box shipments and inventory positions were concerned but the box and containerboard production data was less impressive with an about 1.2% decrease, year-on-year. US boxboard was down, too, by 2% against June 2015.

Data released by PPPC over the June printing and writing paper shipments was weak in both North America and Europe. Total printing and writing paper shipments from North American sources were down by about 6%, year-on-year. Inventories moved up by 2% from end-May. The largest grade, uncoated free sheet, showed a 5% drop in shipments.

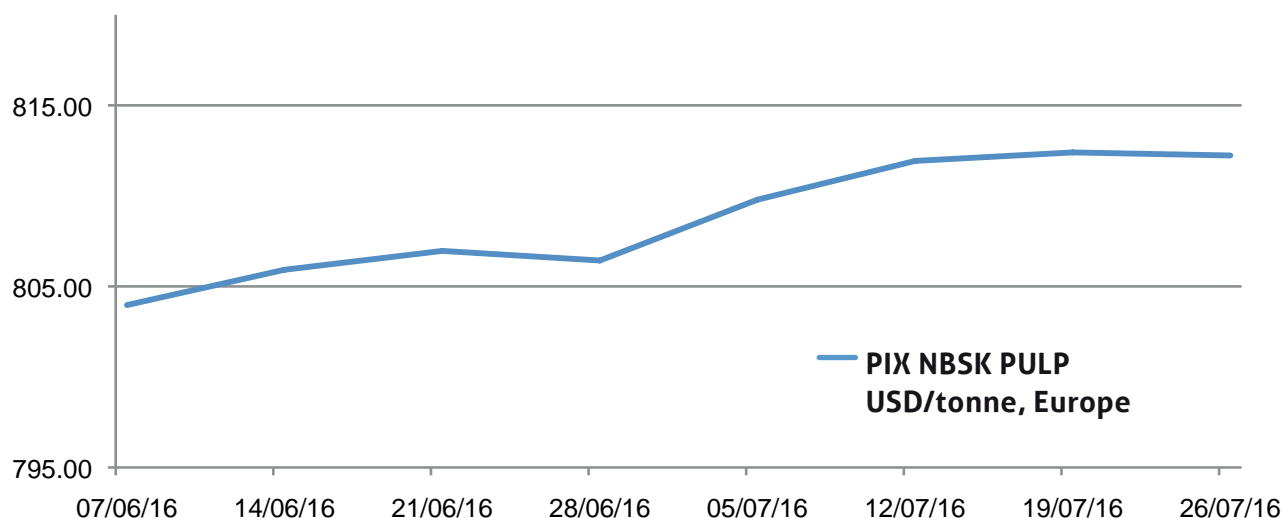
In Europe, June graphic paper shipments, including newsprint, were down by over 7%, year-on-year. Regional demand was down clearly less, or by 3.8% as the 12% retreat in exports outside the region accounted for a fair part of the fall in total shipments. These June data were worse than the cumulative performance.

The first half 2016 graphic paper total shipments were down by 5.4%, regional demand by 3.3% and exports by just over 9%. Newsprint and uncoated printing and writing paper grades show more modest declines than the coated grades. In newsprint, the estimated regional demand was actually up in June against June 2015.

Source: FOEX Indexes



PIX NBSK PULP USD/tonne, Europe



FOEX Indexes Ltd produces audited and trade-mark registered PIX price indices for certain pulp, paper packaging board, recovered paper and wood based bioenergy/biomass grades. The PIX price indices serve the market in a number of ways. They function as independent market reference prices, showing the price trend of the products in question. FOEX sells the right to banks and financial institutions to use the PIX indices for commercial purposes, while RISI Inc. has the exclusive re-selling rights for subscriptions to the PIX data and market information. Please enquire for subscriptions at foexsubs@risi.com or via the following link www.foex.fi/subscribe/.

Tissue papers are produced either from virgin fibre, recovered fibre and various mixes of both, depending on the end product. High quality hygiene tissue products like medical tissue products, facial tissues, table napkins or other such household and sanitary products are often made exclusively or almost exclusively from virgin fibre pulp, whereas the share of recovered fibre typically increases in tissue products for a variety of end uses outside personal hygiene, such as kitchen towels or towels for garages or other such industrial production facilities etc. Providing PIX pulp price indices gives the paper producer and buyer insight in the price trends with a weekly frequency. PIX indices are used as market reference prices e.g.

- by banks or exchanges that offer price risk management services for pulp buyers and sellers
- by buyers and sellers of pulp or paper in their normal supply contracts
- companies who want to employ an independent market reference price for internal pricing (e.g. pulp mill – paper/paperboard mill, paperboard mill – box plant) through licensing the commercial use from FOEX.

In addition, our price indices are widely used in financial analysis, market research and other such needs by all kinds of parties linked directly or indirectly to forest product or wood-based bio-energy industries.

This way the companies have better tools to budget their cost or income structure and profitability, and may concentrate on their core businesses with less time spent on price negotiations, which tend to increase in these days as the planning span narrows in the wake of the short, quarterly business cycles and, nowadays, in most cases, monthly raw material pricing decisions.



'Wherever I am in the world I'm never without face wipes!'

Only now after putting pen to paper – or keystroke to screen – has Australian Aimee Andersen, 33, living in London, realised she is a one-woman research project into tissue use across cultures. Here she passes on some of her insights.

"I really started to think about how much tissue product I use when asked to write this article and I realised that my tissue use overall has definitely gone up.

"I currently use toilet paper, sometimes tissues at work, face wipes at night and always when travelling (a good substitute for everything when on the road!), sometimes kitchen towel and cotton pads. This time ten years ago it was literally just toilet paper and occasionally face wipes. I currently use kitchen towel strictly in the kitchen and usually only to clean up a spill, and I use recyclable cloth for cleaning surfaces; toilet paper I consider a staple necessity. I use tissues occasionally and only at work when cold and flu season hits the office. Cotton pads and face wipes are part of my nightly face cleaning ritual. I have started using kitchen towel and tissues as a matter of convenience.

"Living in London, I find that only particular stores will sell the re-usable kitchen cloth and bamboo cotton face wipes I prefer to use and I can't always get to these particular locations, so the convenience of other paper products tends to override my desire to buy re-usable products.

"When it comes to kitchen towels and toilet paper, I don't stick to particular brands. As they are disposable and will be disposed of at a very fast rate, I buy the no-name brands, usually from the no-name toiletries stores we have here in London and that are on my route home. I have to admit that I hope that they are recyclable, although I haven't looked into this issue properly, which is another dramatic change in my habits. There was a time when I would only buy certified recyclable toilet tissue, but convenience has won again on this issue and I buy bulk and cheap. They need to be good enough quality though, if they are too thin, then cheapest is not the best.

"But I am much fussier about face wipes and tissues. I admit to sentimental buying choices when it comes to tissues, my mum bought Kleenex when I was a child, and I've continued to carry on that buying practice.

"In regards to face wipes, I am very aware of the chemicals that are used, and like to find face wipes that are low on abrasive chemicals in the manufacture and end product. I also am aware that a lot of face wipes aren't biodegradable (or are much slower to break down than other tissue products), so my preferred choices are the Body Shop, Yes to and Eco

Wipes. They cost a bit more and are mostly online, but in my opinion are absolutely worth the extra hassle and expense.

"Interestingly, I've noticed slight differences in tissue habits the first time I flew from Europe to Australia. Bidets aren't used in Australia, so the concept was a foreign one to me – we used toilet tissue only.

"I found that some islands I went to in Greece, Italy and Spain in particular seemed less concerned about toilet and toilet paper usage compared to Australia (think the toilet without a cistern, thin, almost no-existent toilet paper). This was my first experience of walking into a cubicle that was literally a ceramic hole in the ground, and minimal-to-no tissue/paper in sight! People would be likely to complain and not use the facilities if it was the case in Australia, so I found the attitudes in the areas I visited much more relaxed in comparison.

"After this, I went travelling in South East Asia where there was quite widespread poverty and the facilities and access to toilet paper/tissues could sometimes be limited-to-nil. Even when camping in Australia in remote areas with no facilities, toilet paper is considered a necessity. This is why I am never without face wipes!"

"Having studied anthropology, I have always had a keen interest in cultural differences, and I have found that quite a large portion of the world that I have visited will actually only handle toilet paper/tissues/etc. with their left hand, as their right hand is used for eating. It is a very interesting observation when asking for toilet tissue at a hotel counter/supermarket/etc that you will be passed almost everything else with a person's right hand, but toilet paper and tissues (or anything else that is related to bodily functions) will be passed to you with a left hand. You, the receiver, if observing cultural norms, would accept everything given to you with your right hand, but toilet paper/tissues with your left. I saw this a lot in South East Asia, and when talking to many of my friends from Asia (I specifically asked friends from Gambia, Tunisia and Bangladesh), they all confirmed to me this was true of their cultures.

"Coming from Australia and now living in London it highlights to me how this is actually a luxury, not a necessity, by the fact that there is no conscious cultural norm within my own culture that highlights why I would use these products the way I do."

The background of the advertisement is a textured, aged parchment-like surface. It features several faint, hand-drawn geometric diagrams in brown ink, including circles, triangles, and intersecting lines, reminiscent of Leonardo da Vinci's Vitruvian Man. The word 'FORTE' is printed in a bold, dark, sans-serif font in the upper left quadrant. The phrase 'Simply genius' is written in a large, elegant, cursive script in the middle left. A horizontal line separates the main text from the descriptive paragraph. The bottom of the page contains the website URL, a logo for Paper Converting Machine Company, and a logo for Barrywehmler.

FORTE

*Simply
genius*

Forte is still the ultimate frontier in the tissue converting machine market, thanks to its absolute simplicity: only 3 magically triangled rolls to ensure perfect rolled tissue products in an easy, clean and reliable way. To quote Leonardo Da Vinci, "*simplicity is the ultimate sophistication*" (where simplicity is the highest level of technological innovation).

Just ask the over 50 worldwide customers who have already chosen **Forte**.

Private label and brands: Which has the edge now?

By Ron Shirk, industry specialist

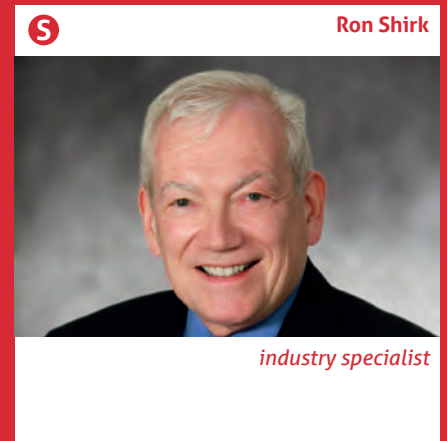
Locally and globally, markets are experiencing "retail climate change." Relationships are shifting, including the relationship between private label and brands. Presently, three areas stand out where change has the potential to dramatically affect the balance of power.

Consumers have spoken

Two Nielsen studies speak to the difficulty of finding the "new normal" following the global financial crisis. In America, "the recession turned into a windfall for private label. But since the end of 2008, overall private label growth has slowed, as brands stepped up promotion and innovation efforts." Globally, "perceptions of private label are favourable around the world,

but value shares are much higher in developed regions like Europe, North America and Australia." For Nielsen, no handholds are seen for getting a grip on the new normal.

Except, another interpretation is possible. The eye opener is that consumers worldwide, by substantial margins, no longer see a defining difference in quality or status between private label and brands. Consumer acceptance has reached and passed that tipping point. Seeing private label as equal to brands is normal now. That shift is not compromised by lower value shares in newer markets. With other circumstances working against private label growth, elevated consumer attitudes become a leading indicator. Further, competing as equals helps to explain how year-over-



industry specialist

year comparisons produce continuing small changes.

Changed attitudes also suggest rethinking the private label-brand relationship. Rivals? For sure, but not



Above: Aldi Grand Opening – Moreno Valley & Arcadia



Our
customers
are at the
core of our
organization

www.ipekkagit.com.tr

With over 45 years of tissue making experience, advanced technology and consistent quality; we provide a strong portfolio of finished and semi-finished products. Outstanding service, flexibility and a solution oriented approach are the key drivers of our long standing partnerships with our customers spanning five continents. **Move your business forward with us!**



Come visit us!
Tissue World İstanbul
September 27th - 29th
BOOTH C141

İPEK KAĞIT

 Eczacıbaşı

more deadly or so different from brand-on-brand or private label-on-private label competition. Partners? Some have pointed to possibly dividing the spoils. Private label focuses on high-volume, commoditised categories. Brands own the others. That's not happening. More productive may be viewing private label and brands as two sides of the same coin. Dedicated competitors, but equally dedicated to becoming the preferred solution to consumer needs.

Another aspect of consumer acceptance involves category expansion. For brands, moving into other categories, often through acquisitions, has shown mixed results. Conversely, entering new categories is second nature for private label, accepted even by consumers who react negatively to big brands. In an American survey, 50% of all respondents reported "having recently tried store brands in categories where they previously bought only national brand items". Private label has a gateway that doesn't apply for brands. Trial and conversion, based on previously having a positive experience in a different category, is a powerful accelerator for private label growth.

Best guess: Improving consumer attitudes are a significant positive for private label.

Discounters keep the pressure on

Because they can. Aldi and Lidl have the will to expand, the resources needed and a game that seems to play well wherever it goes. The principal target is America, presently faced with a major expansion (Aldi) and new entry (Lidl).

Focusing on the West Coast, Aldi will add 650 stores by 2018 (approximately 50 this year), bringing its American total to 2,000. On the East Coast, Lidl will open 150 stores in that time, with an eventual goal of 2,000 as well. For both discounters, the American stores will be larger than European models (in Lidl's case, twice as large). Future concepts will be drawn from across Europe, including healthy and sustainable brands, larger non-food sections, expanded staffing to elevate customer service, and sophisticated marketing support. Also an emphasis on premiumisation, with regard to products and demographics. For decades, Aldi



Above: Lidl's US concept store will incorporate features from future stores in the UK (examples from Britain and Ireland)

store openings in America followed a plan of shadowing Walmart. The West Coast strategy calls for "skillfully-sited stores, accessible to higher income customers, without necessarily hitting high-rent shopping centers". In the same way that private label has closed the gap with brands, discounters have pursued "supermarketisation".

Of course, private label is a key element. Aldi brings its American assortment to California, including Willow, Boulder and Green Action (recycled) in paper categories. Lidl has registered more than 1,000 brand marks for possible use, including Floralys and W5 for paper products. Analysts note the discounters sometimes open up in new areas with an extra ration of brands. But there is no question that private label will over time regain many of those spots. Aldi's and Lidl's American initiatives are expected to disrupt the discount channel and channels beyond, offering shoppers a more intensive private label experience, while moving (or forcing) other retailers to expand their private label activity.

On a smaller scale, Lidl and Aldi continue to expand in Central and Eastern Europe. And then there is the other big fish – with Aldi reported to be developing a China strategy. Noted experts have written off those reports, explaining that Aldi would have to build its infrastructure and supplier network totally from scratch to operate

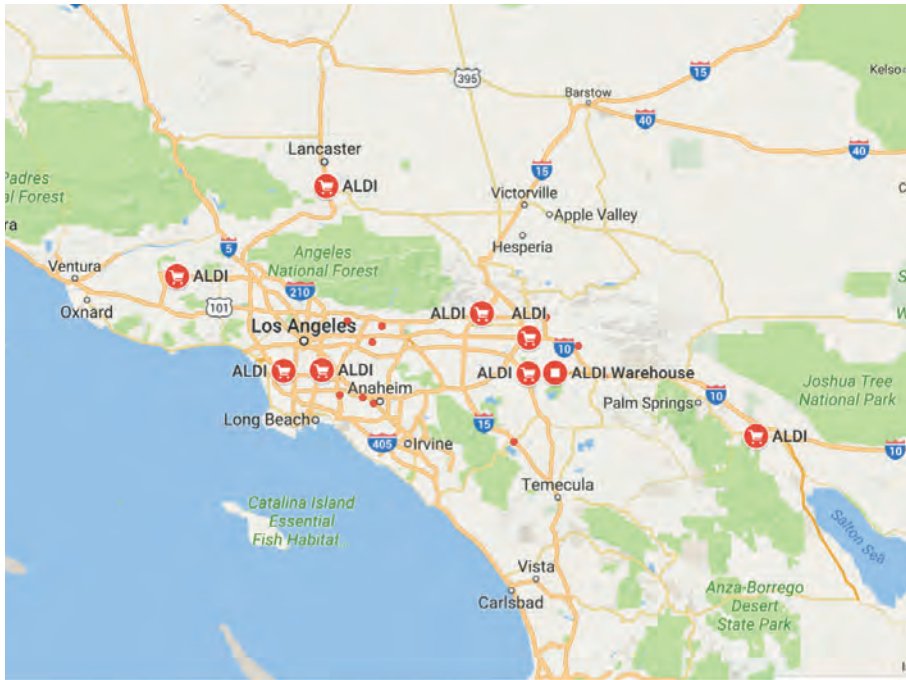
in China, which Aldi would be unwilling to do. Other watchers are not sure that "unwilling" applies.

Best guess: Continued discounter expansion strongly benefits private label.

Online claims its share

Online grocery shopping appears ready to take off, after a slow start. For Retail Tissue & Hygiene, the shift so far has been described as "comparatively low impact". Only 2% of global retail sales (2014) and not quite reaching mid-single digits even in developed markets. But momentum is building. In America, the number of households buying groceries online in the last 60 days jumped from 11% in 2013 to 21% last year. By 2020, retail futurists estimate the online channel will capture 25% – 40% of all American retail sales. Online share will vary widely by category and channel, with expectations (not forecasts) leaning towards the higher end for non-food, commodity categories such as household paper. Retail Tissue & Hygiene would seem most likely to see store customers shift to subscription programs, targeting regular-use products. While still a small segment of online shoppers, subscribers are the most highly satisfied with their experience.

Three Amazon initiatives (the first especially) suggest how online shopping growth might impact private



Above: Map of initial Aldi locations in Southern California

label and brands. Also, how complicated retail dynamics have become.

- The Prime Story – Amazon's business strategy depends on creating Prime members, now estimated to be 45 – 50 million. With those numbers, Amazon is a lifeline to big brands. Thanks to Prime, American online sales of consumer packaged goods rose 42% last year, compared to 30% for e-commerce overall.
- The Dash Button – Prime members press the button to order the likes of

Clorox, Doritos, Purina, Red Bull or Starbucks from home (one button per brand). Some 150 brand participants include Angel Soft, Brawny, Charmin, Cottonelle, Puffs, Quilted Northern and Seventh Generation. Brawny has the second largest Dash basket size. As for Dash prospects, analysts report that after an initial period, use drops off. Customers seem to like shopping around or want to know today's item price before pressing the button, information not provided by Amazon Dash. As use subsides, order volume

is sustained by selling buttons to new Prime members.

- Amazon Private Label – Is coming back, in CPG food and non-food categories, including Mama Bear diapers (after Amazon Elements diapers were dropped last year, but baby wipes survived). Fashion lines are on tap, too. No word yet on paper categories. Amazon private label is seen as a threat to some smaller brands that use Amazon; an annoyance to larger brands.

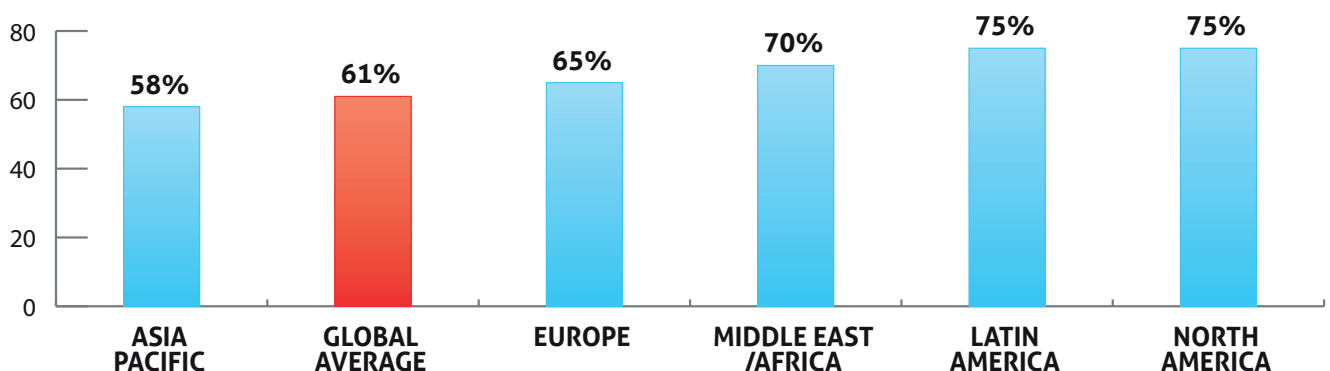
Represented by Amazon, the online shift is a clear and present danger to American retailers that have been put on notice by the industry. Having a fully capable, effective online presence will be critical within the next year, not to match Amazon, but to provide a combination of retail programmes and digital capabilities that will retain and attract shoppers. One wild card is Amazon. The other is how well retailers prepare for the prospect of having shoppers removed from the store environment.

Best guess: Potentially a gain for brands and sizeable loss for retailers (private label). Advantage brands.

Ron Shirk is a specialist in private brand, consumer and retail strategy. His experience as a global analyst and insights leader includes work for American-based consumables retailing specialist Daymon Worldwide.

POSITIVE PERCEPTIONS FOR PRIVATE LABEL ARE SHARED ACROSS THE GLOBE

Private Labels are a good alternative to name brands



Source: Nielsen Global Survey of Private Label

Super soft and super premium quality gaining momentum

TRENDS REVIEW: Euromonitor International's head of tissue and hygiene industry Svetlana Uduslivaia talks to TWM about trends across the private label and branded tissue markets.

Developed markets are still the largest in terms of private label share of sales. Western Europe leads and within Western Europe Germany shows the highest proportion of private label tissue. Successful expansion of discounter format in many Western European markets has helped to further boost sales and share of private label across both tissue and hygiene categories.

Trends in the developed markets also include a shift to better quality consumer tissue, with premiumisation taking place across markets. Private label tissue that features claims to super soft and super premium has been gaining momentum. Competing solely on price is really a thing of the past. Value is of course still important as a proposition behind private label tissue but quality and variety are also increasingly important. Keeping pace and even staying ahead of branded products in offering good value for

money is something that is happening across the developed markets. Innovation has become particularly important with substantial discounting and promotional activities behind many branded products, which often leads to substantial price reduction.

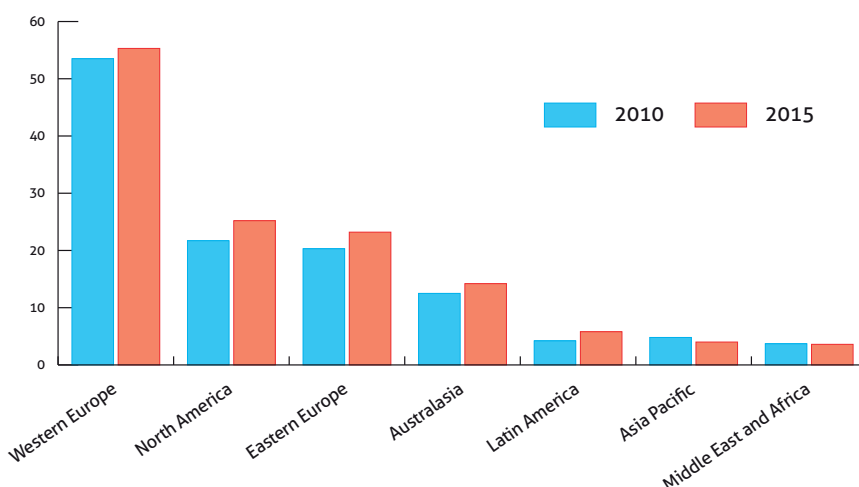
In markets like the US promotions/ discounts on key branded products are very common, and for private label to compete successfully innovation and quality is a must. In tissue products brand loyalty is not as strong. So, consumers would often make decisions about what to buy once they are in store.

In developing markets, private label remains small. However, it has been picking up pace alongside the evolution of modern retail. Modern retail chains' expansion is usually the catalyst of private label expansion as large retail chains have the capacities to develop and market private label products. As modern retail continues to evolve,



Walmart's range in Mexico – Walmart Original (top) and Walmart Premium (above).

Share of retail private label tissue by region as % of retail tissue value sales in 2010 and 2015



consumers also get more familiar with products and private label products in particular (once these start appearing on the shelves). In those countries where private label has already become more noticeable in retail, difficult macro-economic conditions further encouraged the use.

For instance, in Brazil, macroeconomic difficulties have led to higher price-sensitivity among consumers. This trend, coupled with the fact that the quality of private label products is being enhanced and they are gaining more shelf space, encouraged a degree of trading down in consumer tissue. In 2015 private label was the fastest growing in value and volume in Brazil's retail tissue, compared to the branded products.

Elsewhere, Russia saw a significant expansion of private label tissue products, and share of private label tissue sales more than doubled over 2010-2015.

Economic and political difficulties, coupled with significant investments on the part of Russian retailers and manufacturers into private label development, support growth.



Above: A selection of America's premium private label Home Signature range



Above: Sofidel's private label toilet paper product ZeroTubo

Marketing value for money: case of private label ZeroTubo by Sofidel

Value for Money

- Empty space replaced with a mini-roll or compact product throughout
- Extra 50 sheets of toilet paper – more paper for money

Convenience

In toilet paper, mini-roll is wrapped in coated paper and is portable; suitable for school, work, outing and other occasions

Eco credentials

- No wasted space and no waste generated by discarded cardboard tubes
- More paper can be transported, with significant annual savings.

Why premiumisation?

The premiumisation of tissue products creates an opportunity for multi-tiered pricing.

When a private label brand takes the necessary steps in order to accommodate both the value and the premium ends of the product spectrum within the same category, it is engaged in a multi-tiered pricing strategy. This strategy is important for private label brands, owing to the fact that it allows them to cater to consumers with different tastes without alienating a specific consumer segment.

Walmart in Mexico provides an example of how the premiumisation of tissue products can help create a tiered pricing scheme for retailers. Its Great Value brand is often seen as an economy private label brand. That said, Great Value toilet paper is being marketed under the names Original and Premium, with the Premium product being softer in texture.

With the current economic slowdown that has occurred in Mexico, multi-tiered pricing has allowed Walmart to meet consumer demand for both high quality and low prices, while still retaining private label brand loyalty.

US retailers: Premiumising by adding value



Retailers with private labels in highly commoditised categories are increasingly putting emphasis on a premium or ultra

premium positioning to draw consumers who look for a combination of quality and price. For instance, Jewel-Osco, a chain of supermarkets in the US owned by Albertson's and operating 184 stores in Illinois, Indiana and Iowa, has been revamping its private label consumer tissue lines.

In 2015, it introduced its Signature Home collection in its Chicago stores. These premium products are gradually replacing the older value private label.

The updated packaging features claims like "lint free shine", "hydrasorb technology", "soft" and "ultra premium". Furthermore, prices remain competitive with the leading brands, while at the same time are slightly higher than the outdated value line previously carried by the retailer.

Updated packaging, along with added technology, allows for Jewel-Osco's private label products to compete better with brands and increase margins. Additionally, even when brands utilise price slashing techniques during sales, Jewel-Osco's Signature Home will be able to compete in terms of quality.

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 **SÖDRA**

Utilising KemView™ sheet analyser to optimise softness and control the creping process.

By Kemira's Clay Campbell, Lucyna Pawlowska, Xiaosong Huang

There are different roads one can take to achieve tissue softness. The key is to be able to determine how to get there and when you are at your target destination. An easy and reliable measurement of sheet properties that determine softness will help to choose the most effective path and set a measurable sheet quality target.

Paper manufacturers can utilise a variety of process tools to improve overall surface softness, formation and appearance. The most important factors are the fibre type and the hardwood to softwood ratios, followed by machine type and creping process configurations. Each process change impacts the sheet structure in positive or negative ways. The key to improving and maintaining final sheet softness is to measure how each process factor change impacts the sheet structure and then how each change in sheet structure impacts the softness.

Paper process factors that can impact sheet softness	Sheet properties that impact overall hand feel softness
Fibre types	Surface roughness / smoothness
Utilisation of eucalyptus	Total tensile strength
Hardwood to softwood ratio	Sheet stretch
Filler / ash content	Sheet bulk
Tissue machine type	Number of sheet plies
Head box type (stratified)	Sheet drape
Bevel of creping blade	Crepe bar count
Creping blade type and setting	Crepe bar structure
Softeners / debonders / lotions	Free fibre ends
Refining	Sheet moisture during creping
Wet end functional chemicals.	Sheet embossing marks

Conventional crepe bar count methods utilising a camera and microscope with manual measurements tend to be cumbersome and very limited by looking only at one of many important sheet structure variables. Kemira has developed KemView™, a unique sheet structure analyser that provides quick, but very detailed and objective analysis of the sheet structure.

KemView™ sheet structure analyser (SSA) description / features

Kemira KemView™ SSA is an easy to use, fast response, sheet

structure analyser that provides a diverse array of sheet measurements that can be effectively used as a laboratory and field support tool assisting in the diagnostics of paper sheets. It consists of a digital optical detector positioned above two sample trays. The upper tray used for free fibre ends (FFE) measurements and the lower tray is used for crepe structure analysis. LED bulbs illuminate the sheet sample in the upper and lower trays. The sample is illuminated from eight directions: one light at a time for FFE planar count and four light positions for crepe bar structure measurements.

Its features are beneficial for new grade development, external product benchmarking, comparison of the same product manufactured on different machines, and troubleshooting sheet quality issues. It provides quick feedback allowing for optimisation of creping, softening and strength programmes.

A variety of sheet surface properties can be measured using it and Emtec's Tissue Softness Analyser (TSA). Combined results from these two measurements provide a comprehensive insight into the sheet structure and softness, and allow for comparative analysis of various tissue products.

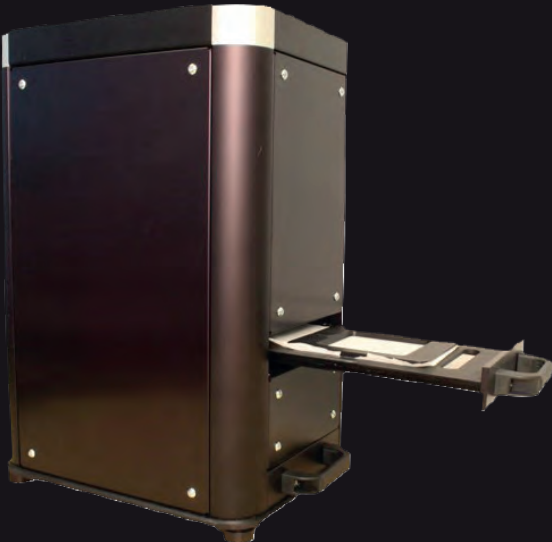
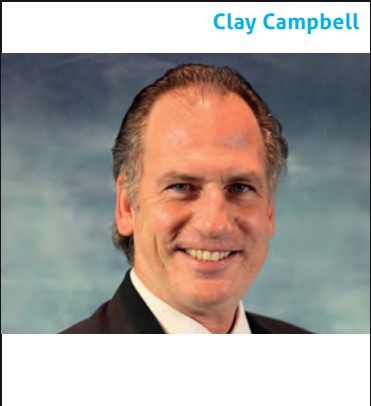


Figure 1, photo of Kemview™ SSA portable unit;

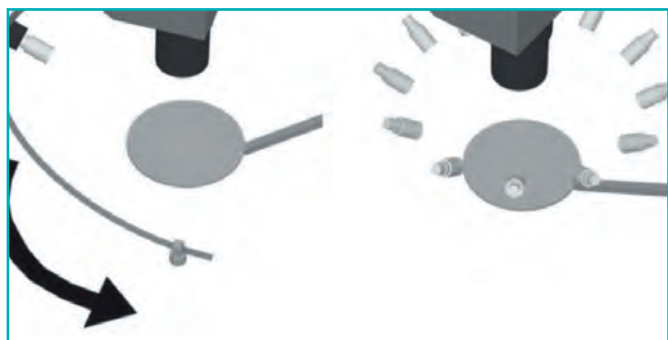


Figure 2, schematic drawing of LED lighting above sheet sample. Each image is drawn to same image on the right

KemView is a novel image-based measurement tool that provides in-depth 3D analysis of the sheet with the ability to easily measure the following parameters:

- Crepe bar count (#/ inch)
- Crepe bar width, length and height
- Crepe bar uniformity and distribution
- Embossing pattern
- Sheet roughness and intensity (crepe visibility)
- Pinholes
- Number of free fibre ends (FFE)

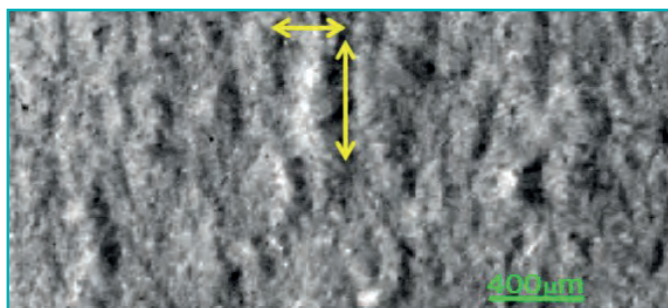


Illustration of crepe bar structure

Typically, a sheet structure that has a high crepe bar count and low crepe bars intensity (visibility) provide softer tissue. The higher free fibre ends count, the softer or more velvety hand feel surface.

The Kemview™ SSA pinhole detection method is based on the linearly polarised light transmitted through paper and the camera with a rotating polariser. The pinholes are detected from the difference of the two images which increases the contrast making the pinholes more visible.

Free fibre ends extending from the surface of the sheet significantly affect tissue surface softness. Many commercial softness analysers tend not to be sensitive enough to detect the beneficial impact of FFE. The fibre source has the most influential impact on the development and formation of FFE. Eucalyptus hardwood fibres are commonly utilised in premium bath and facial tissue grades as it contributes to the highest softness and development of free fibre ends, which results in providing the sheet with a velvety hand

feel surface characteristic. On a per gram pulp basis, eucalyptus offers 20 million FFE, whereas Southern and Northern Kraft pulp provides three and 10 million FFE, respectively.

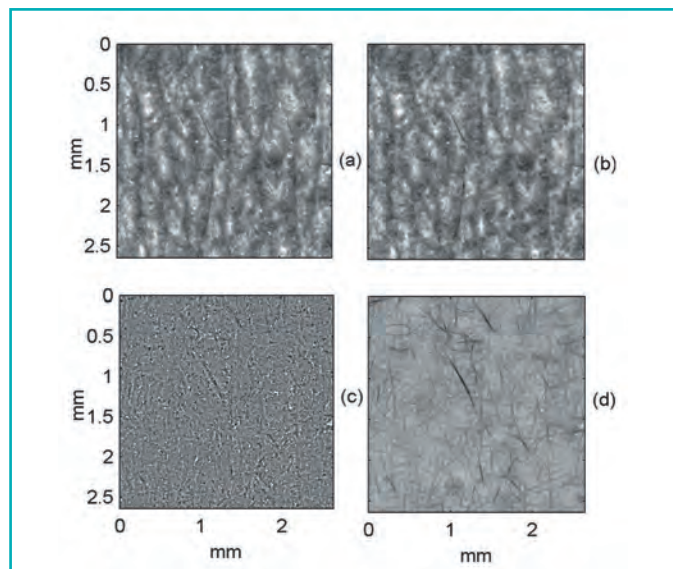


Figure 3, illustration of crepe bar width and length

KemView™ SSA free fibre end shadow imaging detection method and measurement system is patent pending technology, utilising photometric stereo which counts the free fibre ends developed. The free fibre ends are detected from the reflectance images based on the shadows of free fibre ends. The shadows are detected by constructing tissue surface with photometric stereo and finally subtracting it from the creping pattern or original reflectance image from the images of tissue paper with photometric stereo method. The shadows were made visible by removing the creping pattern from the images of tissue paper with photometric stereo method.

In addition, the KemView™ SSA FFE detection incorporates a folded tissue paper method.

The surface boundary was estimated by computing the difference of the pixel vector in the y direction for each x location. The maximum difference in y-direction was obtained and the mean value from the neighboring surface boundary points in the x-direction was computed.

Fibres whose location was more than 50 µm above the estimated surface boundary were considered to be free fibre ends (see Fig. 4). FFE are marked and then counted per cm². It is important to properly manage the development of FFE on the sheet surface by maximising the FFE count and minimising potential sheet lint and dusting potential.



Figure 4: Free fibre end count analysis.

Sheet pinholes can be frequent quality concerns in tissue grades. Typical source of pinholes are biological, organic and inorganic contaminants that deposit on machine fabrics, rolls and sheet surface and cause sheet picking. Another source of pinholes is sheet picking at the Yankee Dryer / doctor blade interface. The Kemview™ SSA pinhole detection method is based on the linearly polarised light transmitted through paper and the camera with a rotating polariser. The pinholes are detected from the difference of the two images which increases the contrast making the pinholes more visible. The difference image was threshold to be able to count the amount and the area of pinholes.

CASE STUDY #1: Comparison of retail 2ply consumer facial tissue from four different manufacturers

Four North American consumer facial tissue products were tested for sheet strength, crepe structure, FFE's & softness utilising a tensile tester, KemView™ SSA, and Emtec TSA. Facial tissue #1 followed by facial #2 had the highest TSA hand feel (88.8 and 85.3, respectively), while facial #4 had the lowest hand feel (78.7). There was not a major spread between the four consumer facial products.

Within each facial tissue sheet there are parameters that are better and worse than others. By addressing the areas of weakness, overall softness improvement for each product can be achieved.

Within each facial tissue sheet there are parameters that are better and worse than others. By addressing the areas of weakness, overall softness improvement for each product can be achieved.

Facial tissue #1 appears to be made on a TAD structured sheet machine, as indicated by sheet structure design, while the three other facial samples were made using a conventional dry crepe process. FFE count of facial tissue #1 may be low as a result of the structured sheet design.

Facial tissue #2 has a very high crepe bar count (101ct. in) and high sheet stretch.

Facial tissue #3 has poor surface smoothness, high crepe bars intensity and a very low crepe bar count. An increase in the crepe bar count and decrease in crepe bars intensity could increase TSA hand feel from 80.5 into the mid 80's.

Facial #4 had a very high FFE count and a relatively high crepe bar count, which contributes to tissue softness. However, both bulk softness and surface smoothness measured by TSA are not that great. In this case, selecting fibre of higher quality could improve softness.

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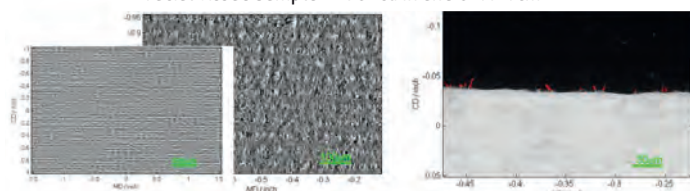
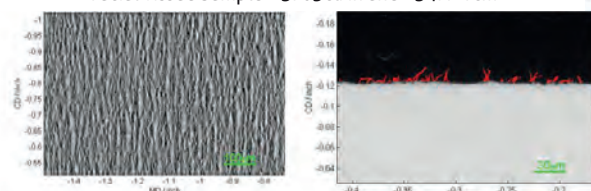
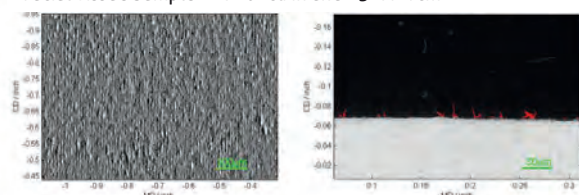
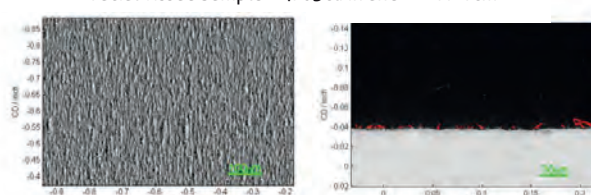
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Test methods	Measurement	Effect on softness	Facial #1	Facial #2	Facial #3	Facial #4
TSA	HF – Hand feel	Higher the better	88.8	85.3	80.5	78.7
	TS 7000 – Bulk softness	Lower the better	8.8	9.6	10.5	11.7
	TS 750 – Surface smoothness	Lower the better	7.2	9.7	15.2	13.8
	D (mm/N) – Stiffness	Higher the better	2.9	2.9	3.0	2.7
Sheet Properties	Caliper		0.134	0.131	0.136	0.122
	MD Tensile (gF/in)	Lower the better	0.71	1.03	1.03	0.69
	MD Stretch (%)	Higher the better	14.6	32.1	24.5	23.4
	MD TEA		0.067	0.171	0.119	0.082
KemView™	FFE - Velvety surface softness	Higher the better	81	152	234	211
	Crepe count (ct. /inch)	Higher the better	81	101	65	90
	Intensity (%)	Lower the better	0.43	0.59	1.21	0.78
	Roughness (mm)	Lower the better	0.0041	0.0021	0.0034	0.0027

Facial Tissue Sample #1: 81ct/in and 81FFE/cm²

Facial Tissue Sample #3: 65ct/in and 234FFE/cm²

Facial Tissue Sample #2: 101ct/in and 152FFE/cm²

Facial Tissue Sample #4: 65ct/in and 211FFE/cm²


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ANALYSIS & PLANNING

How big is the market and how is it growing?
How is capacity changing?
How competitive are we?
Is there profitability in exporting?
How do financial performances compare?
Which regions have the most potential?

OPERATIONS & PRODUCT DEVELOPMENT

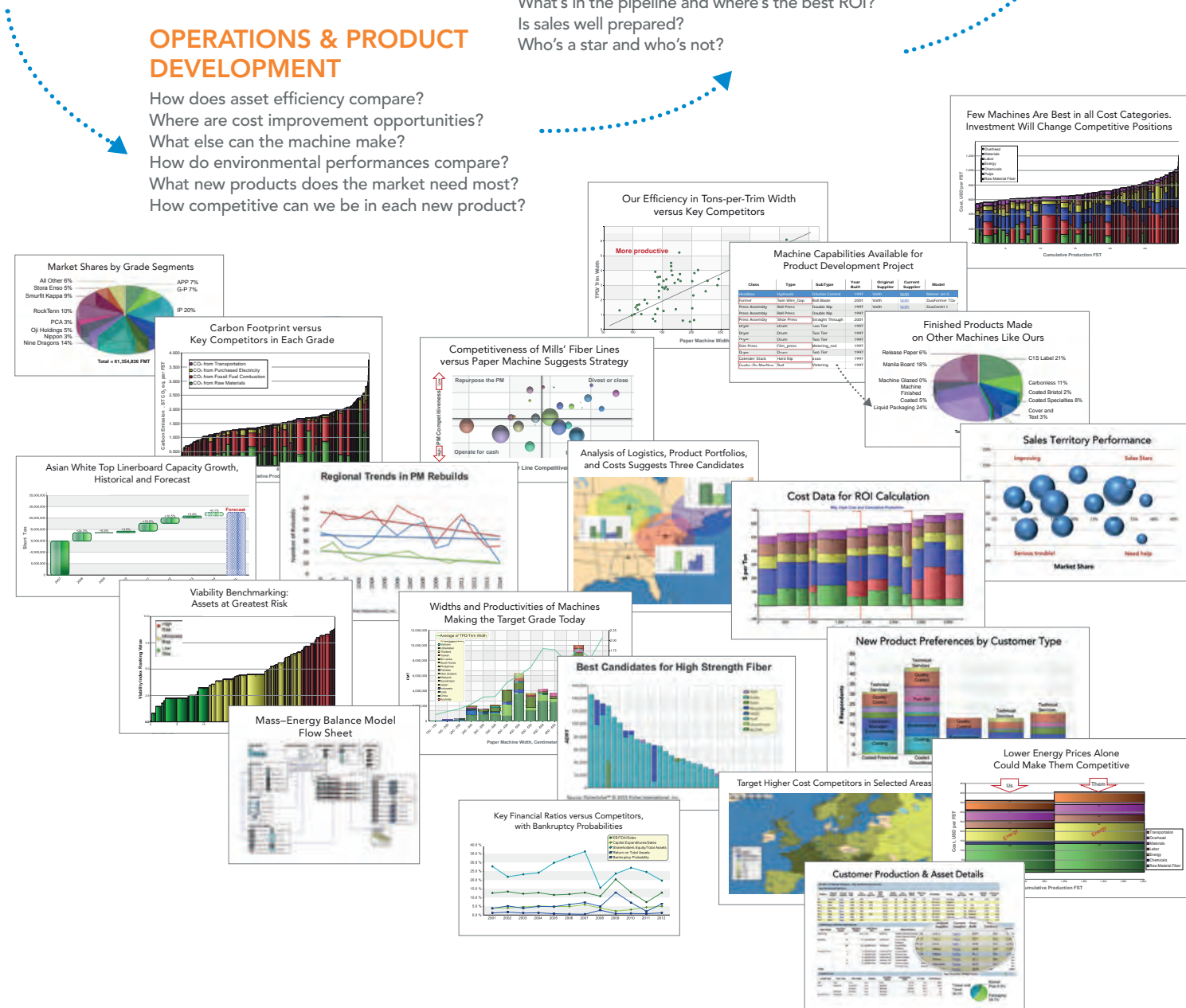
How does asset efficiency compare?
Where are cost improvement opportunities?
What else can the machine make?
How do environmental performances compare?
What new products does the market need most?
How competitive can we be in each new product?

SALES & MARKETING

Where are the best margins to be found?
How cost-competitive is each asset?
How attractive is the market for a new product?
What's in the pipeline and where's the best ROI?
Is sales well prepared?
Who's a star and who's not?

INVESTMENT, M&A, & ASSET DISPOSAL

What should be sold, repurposed, or closed?
Which competitors should be targeted?
Whose products and locations fit best?
Where should capital be spent and why?
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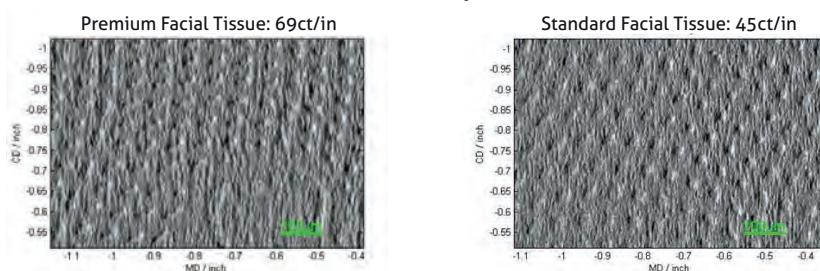
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CASE STUDY #2: Comparison of standard and premium facial tissue produced by one tissue manufacturer

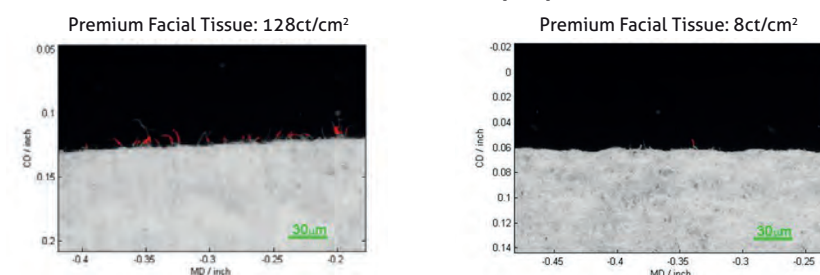
Two Asian facial tissue samples (premium vs standard) were analysed using Emtec Softness Analyser and KemView™ Sheet Structure Analyser. Premium facial has higher overall TSA hand feel softness (73.1) than standard facial (58.6), but both overall are not very soft. This may be due to a large extent to a low crepe bar count and poor crepe structure. Premium facial has a fairly high FFE count (128 ct./cm²), while the FFE count in the standard is very low (8 ct./cm²). It appears that the standard facial is not utilising high quality fibres, as indicated by an extremely low FFE count.

Standard facial has more and finer crepe bars (69 ct./in) than premium facial (45 ct./in) and lower crepe bars intensity (visibility). The surface roughness of premium tissue is higher than surface roughness of standard tissue (0.079 vs. 0.056), which indicates a deeper embossing pattern of premium tissue.

Facial Tissue Crepe Structure



Free Fibre Ends (FFE)



Test methods	Measurement	Tests	Effect on Softness	Facial #2	Facial #3
TSA	HF – Hand feel	Hand feel	Higher the better	73.1	58.6
	TS 7000 – Bulk softness	Bulk softness	Lower the better	8.75	17.2
	TS 750 – Surface smoothness	Surface smoothness	Lower the better	42.5	29.1
Sheet Properties	Caliper	Sheet thickness	Lower the better	320	298
	MD Tensile (gF/in)	MD tensile index (N.m/g)	Lower the better	5.3	6.6
	MD Stretch (%)	Avg. MD Stretch %	Higher the better	11.7	23.9
	MD TEA	Total Energy Absorbed	Higher the better	3.44	4.11
KemView™	FFE	Velvety surface softness	Higher the better	127	8
	Crepe bar count		Higher the better	45	69
	Intensity		Lower the better	0.924	0.762
	Roughness		Lower the better	0.079	0.056

Conclusions

There are many process factors effecting sheet softness. Kemira's KemView™ SSA unique multi-functional portable measurement tool provides quantitative insight into the sheet structure, creping efficiency, free fibre ends, pinholes and overall sheet surface parameters that correlate well to sheet softness. KemView™ SSA

is an effective field support tool allowing quick testing feedback, troubleshooting sheet quality and production issues, and optimisation of the creping process.

This article was written for Tissue World magazine by Kemira's Clay Campbell, Lucyna Pawlowska, Xiaosong Huang.

Chemical technology breakthrough targets significant Yankee Dryer performance improvement

Thomas L. Wright, technical director, Georgia-Pacific Chemicals, explains how the NAVIGATOR coating programme is designed to operate in today's demanding environment of high temperatures and low reel moisture. A TWM report.

The Yankee Dryer reflects the sum total of all the profile and moisture variables of a paper machine. This makes the Yankee Dryer coating package the last opportunity to achieve targeted sheet specifications for the finished product. It is at the core of determining the endpoint of sheet characteristics and machine production uptime. Along with sheet quality, protection of the expensive dryer is an essential consideration of the Yankee Dryer coating formulation.

Standard coating packages have been unable to effectively meet two recent trends in tissue making. First, the introduction of recycled fibre has required better protection for the Yankee Dryer itself. Secondly, the evolution toward low moisture environments for tissue creping grades has limited the ability of standard coating packages to create a durable, pliable, and cohesive coating that maintains sheet control, manages adhesion and prevents chatter.

In addition, the pursuit of improved quality in terms of stretch, bulk and softness has driven dryer surface temperatures up, in particular those of the dryer edges, increasing them as much as 100°F.

Traditional Yankee Dryer coating chemistries have struggled to perform in this new environment of higher temperatures in the creping process. In response, coating deficiencies have

required that machine parameters be pushed in an attempt to improve the chemistries' performance. The new NAVIGATOR® coating technology from Georgia-Pacific Chemicals, however, allows the paper machine to operate at its peak performance without being limited by Yankee coating constraints.

A breakthrough 10 years in the making

Leveraging its understanding of, and expertise in, the molecular level of paper chemicals and their molecular interaction with paper, Georgia-Pacific Chemicals scientists invested ten years of concentrated research developing NAVIGATOR Yankee Dryer products. They are uniquely formulated to operate in today's demanding environment of high temperatures and low reel moisture while producing quality products with maximum throughput.

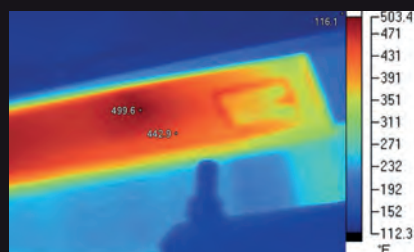
The NAVIGATOR coating programme is tailored for each individual machine's specific operational environment and quality specifications.

Figure 2 is the roadmap utilised by the scientists at Georgia-Pacific Chemicals to connect the molecular changes required to formulate those specific features for Yankee Dryer protection and sheet control.

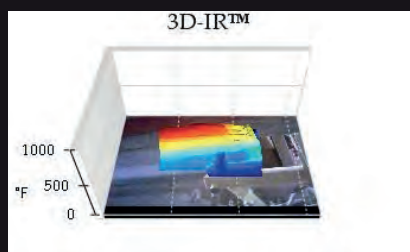


The first step taken to formulate products customised for an individual machine is a machine audit. This audit reveals the influencing chemical, furnish, mechanical and temperature parameters that will need to be managed by the coating chemistry. Manufacture of the coatings is based on this analysis to produce the molecular structures best suited for the machine's particular needs and environments.

The resulting NAVIGATOR coating and release products perform under a wide range of sheet moistures, operating temperatures and grade targets, and are effective on both standard and structured sheet machines. The NAVIGATOR reactive formulations form coatings exponentially improved beyond the traditional fully and partially crosslinked polyamideamine-epichlorohydrin (PAE) structures.



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Graph



Visible Light Image

Figure 1. IR studies have shown Yankee dryers' surface temperatures on low moisture crepe grades can exceed 300°F on the dryer edges and can average as much as 250°F in the centre.

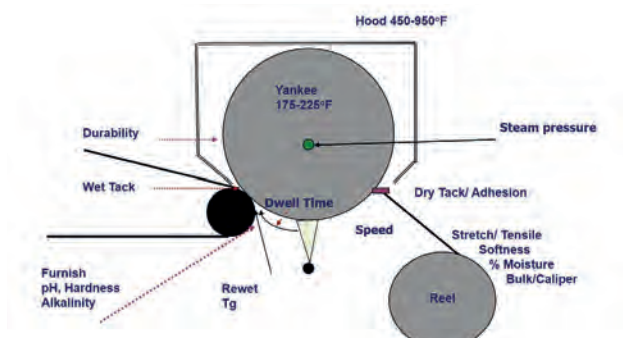


Figure 2. Parameters that Yankee dryer requirements connect to molecular structure in order to create individualized coatings formulation.

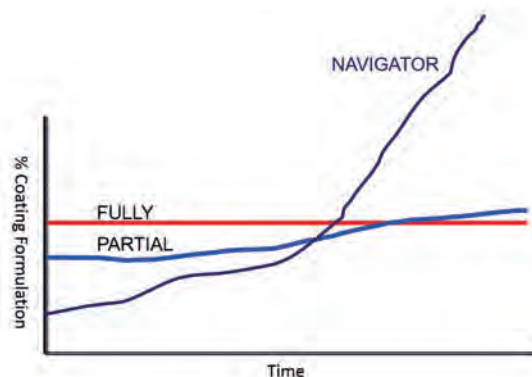


Figure 3. Graphic comparison of the geometric improvement of NAVIGATOR coating performance versus historical PAE film coating formation.

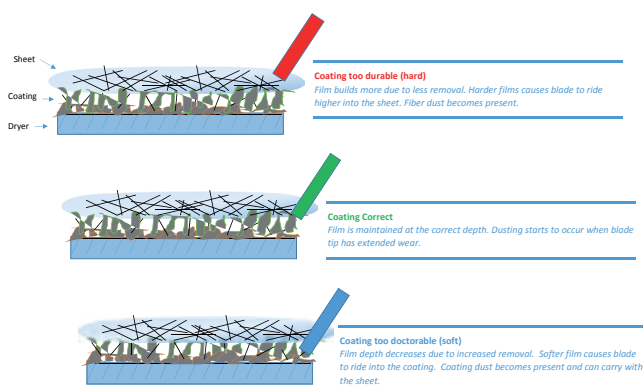


Figure 4. Illustration of blade depth results and the strategy of controlling coating reactivity

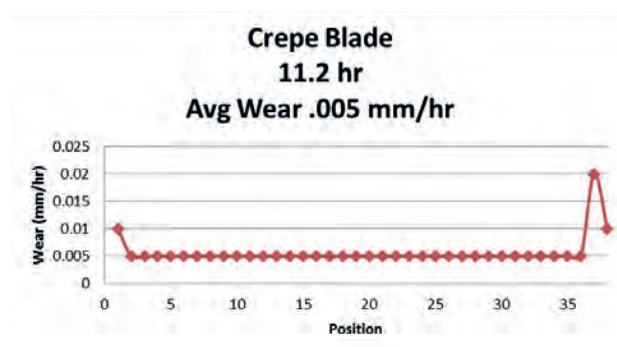


Figure 5. Even blade wear development with minimal wear per hour

The specific benefits that have been seen in actual manufacturing conditions indicate the NAVIGATOR products represent a real breakthrough for the industry, particularly for premium grade sheet production machines.

Benefits

The ever increasing demand on Yankee Dryer programmes to perform at higher temperature ranges as well as the demand for low moisture creping with its reduction in bonding sites in the coating matrix, challenge the ability of coatings to maintain cohesive force and adhere sheet edges. NAVIGATOR Yankee coating programmes can form a coating film that captures the available moisture to maintain the correct film softness and coating wet tack needed.

The tailored NAVIGATOR coating regulates creping blade depth and, coupled with durable cohesive forces on the sheet, maintains sheet edge controls. As a result, the coating keeps the dryer edges from hardening so chatter does not form on the Yankee Dryer surface. The machine-specific natures of the NAVIGATOR coating products create a greater depth of film that protects the Yankee dryer and allows the creping blade to ride through the coating at the optimum depth.

Benefits include higher production, improved blade wear as well as the ability to increase crepe ratio and sheet softness.

In conjunction with NAVIGATOR coating formulations, Georgia-Pacific Chemicals has developed a new range of release agents and modifiers to control coating development rates. These

products also work with reactive PAE formulations to extend blade life and develop an even Cross Direction (CD) blade wear on the dryer. A line of NAVIGATOR softeners and debonders designed to meet the specifications for sheet softness, bulk and absorbency is also available.

CASE STUDY

A towel manufacturer realised a 16% increase in output by applying NAVIGATOR Yankee Dryer chemicals without making any other adjustments to its operation. This product trial demonstrated improved edge control, positive dry crepe improvement and exceptional sheet transfer at the pressure roll. Sheet softness and bulk were improved to achieve their targeted specifications.

Summary and conclusions:

To compete effectively, tissue and towel manufacturers require the flexibility to meet changing demands for softness, strength, higher crepe or other market-desired attributes. To maximise that flexibility to move quickly, the depth of understanding of an individual paper machine can result in meeting those demands easily. The proven, tailored NAVIGATOR programme provides manufacturers with that understanding and success.

This article was written for Tissue World magazine by Georgia-Pacific Chemicals' technical director Thomas L. Wright

A tissue industry “overwhelmed” with new paper convertors entering the local market

Tissue consumption growth remains at 15% in the United Arab Emirates despite an economy hit by a fall in oil prices. Sajid Hussain, general manager of Gulf Manufacturing Company, explains why.

The United Arab Emirates (UAE) has three paper mills that have a collective production of 135,000mt annually. The per capita consumption of tissue paper in UAE in 2014-15 is estimated at 13.80kg, compared with 24kg in the USA, 18kg in Western Europe and 4.5kg in China.

In the Middle East, excluding Turkey and Egypt, the UAE is fifth in terms of T&T producing countries with 14% of the capacity share, after Iran and Saudi Arabia.

An adequate proportion of the UAE's tissue paper consumption is for facial

from its banking system. The banks were being very cautious and were reluctant to finance new projects. Additionally, Crown Paper Mills was sold out to another paper group and a few paper convertors are facing financial difficulties.

At the same time friendly business policies and the diversified policy of UAE helped the business community retain its confidence and with the influx of more workers and go-green policies, the level of growth has been maintained. Consumer confidence is also coming back as chain stores are offering better deals. The price of raw materials has

“More growth is expected here as we see an increase in tourism as well as new manpower arriving in the country. In particular, the hotel and restaurants segment is constantly growing at a very stable pace. With more shopping malls and institutions, the tissue industry is overwhelmed with new paper convertors in line to enter the local market. Today, there are roughly 64 tissue paper convertors in the country.”

Sajid Hussain

tissue and the market overall is still growing in terms of consumption at 15% annually. There is a lot of potential for the tissue market here.

More growth is expected here as we see an increase in tourism as well as new manpower arriving in the country. In particular, the hotel and restaurants segment is constantly growing at a very stable pace. With more shopping malls and institutions, the tissue industry is overwhelmed with new paper convertors in line to enter the local market. Today, there are roughly 64 tissue paper convertors in the country.

During 2015-2016, the UAE tissue industry witnessed some tough market trends due to the fall in oil prices. This showed how affected the country is

also lowered which has improved the situation for everyone.

There is substantial competition between the leading convertors to introduce something new to the marketplace and enhance their sales as well as their customer base.

“Friendly business policies and the diversified policy of UAE helped the business community retain its confidence and with the influx of more workers and go-green policies, the level of growth has been maintained. Consumer confidence is also coming back as chain stores are offering better deals. The price of raw materials has also lowered which has improved the situation for everyone.”

Sajid Hussain



In response to this, Gulf Manufacturing has purchased a large area in Emirates Industrial City to add more converting lines in addition to our existing lines. We have already started negotiations with major European manufacturers to help us enable this.

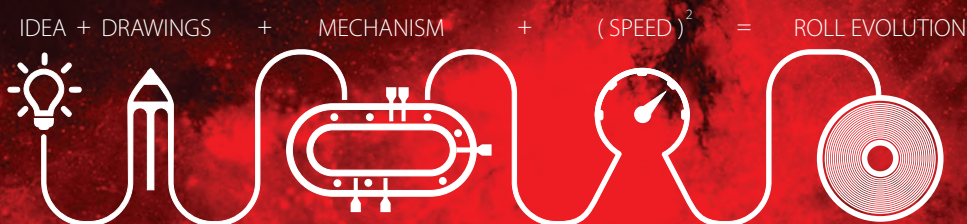
Additionally, the vision of Aljabor group managing director H.E. Sheikh Nawaf Bin Jabor Al-Thani will see another converting project started-up in Doha-Qatar in 2018.

This indicates the confidence in the tissue industry as well the entire UAE region.

Sajid Hussain is the general manager of Gulf Manufacturing Company, a Sharjah, United Arab Emirates-based tissue manufacturer.



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This revolutionary product will be presented in April 2017 during exhibition **Tissue World Milan**.

The 15th anniversary for STAX Technologies does not mean that we should be satisfied continuing on well-known paths, but most importantly to go beyond our own limits and aim to be the ones who set the standards in the industry. The upcoming fair in Milan is a great opportunity to demonstrate our long-standing commitment and dedication.

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Labelexpo Americas	September 13 - 15, 2016	Chicago, USA	www.labelexpo-americas.com
Tissue World Istanbul	September 27 - 29, 2016	Istanbul, Turkey	www.tissueworld.com/Istanbul
ISSA/INTERCLEAN North America	October 25 – 28, 2016	Illinois, USA	www.issainterclean.com/northamerica
Labelexpo India	November 17 - 20, 2016	Delhi NCR, India	www.labelexpo-india.com
Label Summit South China 2016	December 6 - 7, 2016	Guangzhou, China	www.labels Summit.com/southchina
ISSA/INTERCLEAN Latin America	February 22 - 24, 2017	Mexico City, Mexico	www.issainterclean.com
CIDPEX 2017	March 22 - 24, 2017	Hubei, China	www.cnhpia.org/en/shyz
Tissue World Milan	April 10 - 12, 2017	Milan, Italy	www.tissueworld.com/Milan
2017 PaperCon	April 22, 2017	Minneapolis, USA	www.tappi.org/events/event-calendar/2017-papercon
ISSA/INTERCLEAN CEE	April 26 - 28, 2017	Warsaw, Poland	www.issainterclean.com
Tissue World São Paulo	May 31 - June 2, 2017	São Paulo, Brazil	www.tissueworld.com/SaoPaulo
Labelexpo Europe 2017	September 25 - 28, 2017	Brussels, Belgium	www.labelexpo-europe.com
Tissue World Miami	March 21 - 23, 2018	Florida, USA	www.tissueworld.com/miami
ISSA/INTERCLEAN Amsterdam	May 15 - 18, 2018	Amsterdam, Netherlands	www.issainterclean.com/en/amsterdam
Asian Paper 2018	June 6 – 8, 2018	Bangkok, Thailand	bangkok.asianpapershow.com



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What is your company's primary field of business (tick all that apply):

A. INTEGRATED TISSUE PRODUCTS MAKER

Primary business making paper and producing:

- ☐ Consumer (At Home) Finished products
☐ Away-from-Home (AFH) Finished products
☐ Other Tissue Grades, please specify:

B. JUMBO ROLL SUPPLIER

- ☐ Jumbo Roll Maker, for sale to converters

E. SUPPLIER TO THE TISSUE INDUSTRY Please check all that apply:

- ☐ Paper making machinery
☐ Fabrics, felts, clothing
☐ Drying technologies
☐ Process automation and control
☐ Water treatment, environmental and effluent control
☐ Dust control and air treatment systems
☐ Doctors and creping blades
- ☐ Deinking
☐ Stock preparation, fiber processing and pulping equipment
☐ Fibers: Market pulp and recycled fiber
☐ Chemicals and chemical technologies
- ☐ Converting machinery and supplies
☐ Printing machinery and supplies
☐ Inks, glues and dyes
☐ Embossing rolls

C. TISSUE CONVERTER

Primary business is converting jumbos and producing:

- ☐ Consumer Finished products
☐ Away from Home (AFH) Finished products
☐ Other Tissue Grades, please specify:

D. RETAILING AND DISTRIBUTION

- ☐ Retailer
☐ Broker
☐ Distributor
- ☐ Knives and blades
☐ Folders/interfolders
☐ Cores and coreboard
☐ Wrapping/Packaging equipment and supplies
☐ Transport and logistics
- ☐ Energy and Power
- ☐ Testing machines
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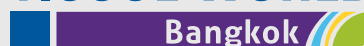
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