PACKPRINT WORLD

PACKPRINTWORLD.COM

AUTUMN 2014

PLASTIC COATINGS, STEP ASIDE

Smart Planet Technologies' mineralized resins are replacing plastic coatings, offering multiple benefits

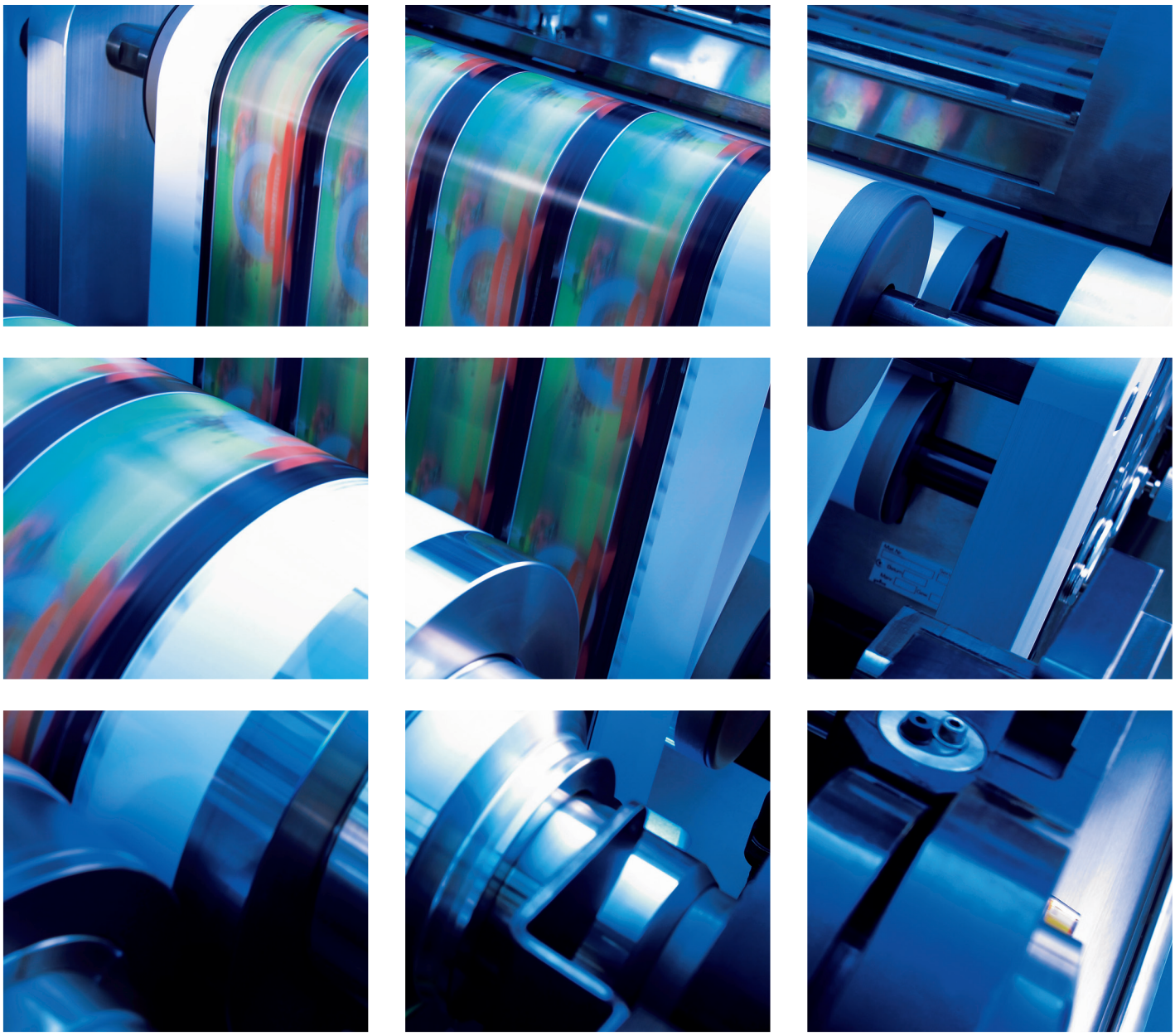
AUTUMN 2014

+ SHORT-RUN MATERIAL SUPPLY

THE LATEST IN DIGITAL PACKAGE PRINTING AND CONVERTING

SUSTAINABLE FOREST MANAGEMENT PRINCIPLES

SOLUTIONS FOR HIGH-QUALITY SHORT TO MEDIUM RUN PRINTED PACKAGING



Success and security for the labelprinter

Digital now

Gallus Innovation Days

23 – 25 September
St.Gallen I Switzerland

Register now

www.gallus-group.com

gallus

A partner of Heidelberg

Innovative technology & engineering for web handling

DELTA INDUSTRIAL

Delta Industrial offers manufacturing solutions for a variety of complex medical, pharmaceutical, label, security, RFID, packaging and cosmetic products.

Delta Mod-Tech® converting, finishing and packaging systems are designed and engineered to meet your application requirements, improve your profitability, and reduce your risk. Delta is dedicated to providing ***precise, flexible*** and ***innovative*** manufacturing solutions worldwide.

9 - 11 September • Chicago

LABELEXPO AMERICAS 2014

www.labelexpo-americas.com

Delta will feature 3 manufacturing solutions at this show!
- Delta Spectrum® finishing system- Booth 3523
- Delta flexEDGE™ Laser Technology - Booth 3523
- Delta Mod-Tech® Converting/Packaging - Booth 6450

Booth 3523 & Booth 6450 www.deltamodtech.com

www.deltamodtech.com 800-279-3358 +1 763-755-7744 +46 706 97 24 34 delta@deltaind.com Minneapolis, MN

CONTENTS

Editorial
editor@packprintworld.com

Andy Thomas Group Managing Editor
David Pittman Group News Editor
Nick Coombes Consultant Editor
Mike Fairley International Publishing Director
Danielle Jerschefske North America Editor
James Quirk Latin America Editor
Kevin Liu China Editor
Carol Houghton Editorial Assistant

Advertising
sales@packprintworld.com

Tim Gordon Publishing Director
Joerg Singer Advertising Manager – PPW
Randy Kessler Advertising Manager – North America
Richard Quirk Account Executive – EMEA
Pradeep Saroha Account Executive – India
Jerry Lee Account Executive – China
Tina Wang Account Executive – China

Subscriptions
subs@packprintworld.com

Production
production@packprintworld.com

James Wenman Design and Production Manager

Marketing & Circulation
marketing@packprintworld.com

Michael Hatton Marketing Director

Management
Roger Pellow Labels and Packprint Group Chairman
Lisa Milburn Managing Director
Tasha Ventimiglia Event Director

Publishers
Tarsus Exhibitions & Publishing Ltd, Metro Building, 1 Butterwick, Hammersmith, London W6 8DL, UK
T: +44 (0)208 846 2700
ISSN 1478-7520

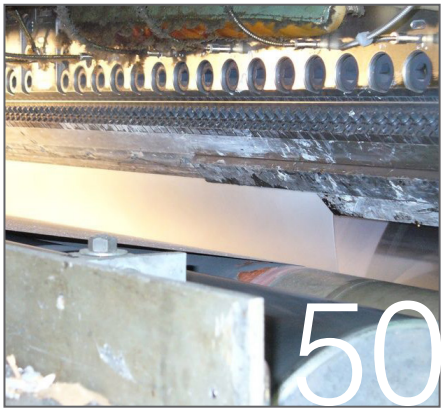
US office
Tarsus Exhibitions and Publishing Ltd,16985 West Bluemound Road, Suite 210, Brookfield, WI 53005, USA
T: +1 262 782 1900

China office
Tarsus Publishing Inc, Room 1108, Floor 11, 1 Hongqiao Road Xu Hui, Shanghai, China
T: +86 21 64484890 | **F:** +86 21 64484880

Printers
Advent Colour, Andover, Hants

FEATURES

COMMENT



AN INDUSTRY INVESTS

Given what many of us have heard and experienced in recent years, it is pleasing to be able to write about, read about and see the level of investment that is going on in the global package printing market.

Across the world, printers and converters have been buying the latest and greatest kit from manufacturers up and down the supply chain. In Europe, this has seen the UK's Kingston Carton target new markets with a double investment in Bobst finishing equipment, Russia's Duprint install a Polar N 92 Pro, UNI Packaging invest in an HP Indigo 20000 digital press and Gafs Kartong to install the first Highcon Euclid in the Nordic region. In China, Caihua has installed three machines from Comexi as part of the expansion of its production plant in Kunshan, Shanghai, while in Lahore, Pakistan, Packages Limited has chosen a KBA Rapida 106. In Mexico, Grupo Reyes Hermanos has made a major investment in Heidelberg equipment, and Lima, Peru-based OPP Film is to be the first company to install a new 4.8m-wide Atlas CW5400 slitter rewinder. And in North America, a specially-configured KBA Rapida press with full automation has been sold to Multi Packaging Solutions (MPS) for board packaging and plastic printing, 3C! Packaging has bought a 13in, 6-color Nilpeter FB-3300. WS Packaging Group is to make an investment of 43 million USD over the next two years, which will involve adding new equipment that will enable the company to increase production using various printing processes.

Many of these technologies and products will be on show at tradeshows around the world in the coming 18 months, right through to drupa 2016. This includes Labelexpo Americas 2014, a preview of which can be found later in this issue, and where a wealth of package printing technologies will be on show as the opportunities for narrow web printers to expand into different markets continue to expand.

Next spring's Gulf Print & Pack 2015 will similarly demonstrate technologies and opportunities, but for a much wider gamut of print industries, with many from the commercial print and graphic arts markets having a keen interest in the packaging market due to its strong performance globally. Taking place in Dubai on April 13-16, you can expect to see and meet representatives from suppliers and printers across the region, as well as from key markets like Turkey, India and Africa.

David Pittman
Group news editor
editor@packprintworld.com

NEWS

Pro Carton president Roland Rex and Andreas Blaschke, his counterpart at ECMA

ASSOCIATIONS PREPARE FOR JOINT CARTON CONGRESS

ECMA and Pro Carton are gearing up to host their first joint congress in Sorrento, Italy on September 17-20,

The congress provides the European folding carton industry and their supply chain partners a unique opportunity to meet, exchange information and trends, and network.

2014 will be the first time that ECMA and Pro Carton have organized a congress together, although Pro Carton has had an involvement with recent ECMA Congress events, particularly with the award of the Pro Carton/ECMA Awards for outstanding carton packaging. The two bodies have now decided to open up the congress and involve the whole supply chain with brand owners and other industry partners welcome to attend this year.

As well as the 2014 Pro Carton/ECMA Awards, the ECMA-Pro Carton Congress will play host to the Pro Carton Young Designer Awards for design students from across Europe, which are awarded every two years.

The judging panel for the Pro Carton ECMA Awards 2014 met at the beginning of July, with over 120 entries from 12 European countries received. The finalists are to be announced in mid-August, and covered online at www.packprintworld.com.

Of the award entries this year, judging panel chairman Satkar Gidda said: 'This year we had the second highest level of entries ever. Added to that is that we also had some superbly high-quality entries.

'And what I have noticed is the increasing level of attention to detail that is going into the packaging designs. It is very impressive the way things are being done, the innovation that is being considered, and the judges found it equally hard to come to their conclusions. Looking at the entries from different areas and different expertise, we were able to come to a more conclusive discussion about which designs and which packaging to take forward.'

PARTNERS TO COLLABORATE ON DIGITAL PRINTING

BDT Media Automation, Fujifilm Dimatix and Phoseon Technology have agreed to work together to develop a complete digital printing system for packaging applications.

BDT Media Automation specializes in B2 format feeders in digital printing, Fujifilm Dimatix provides inkjet printheads and Phoseon Technology develops UV LED curing technology. The partners said the system will take advantage of the flexibility of the BDT Tornado media handling technology and the versatility of UV printing provided by Fujifilm Dimatix and Phoseon.

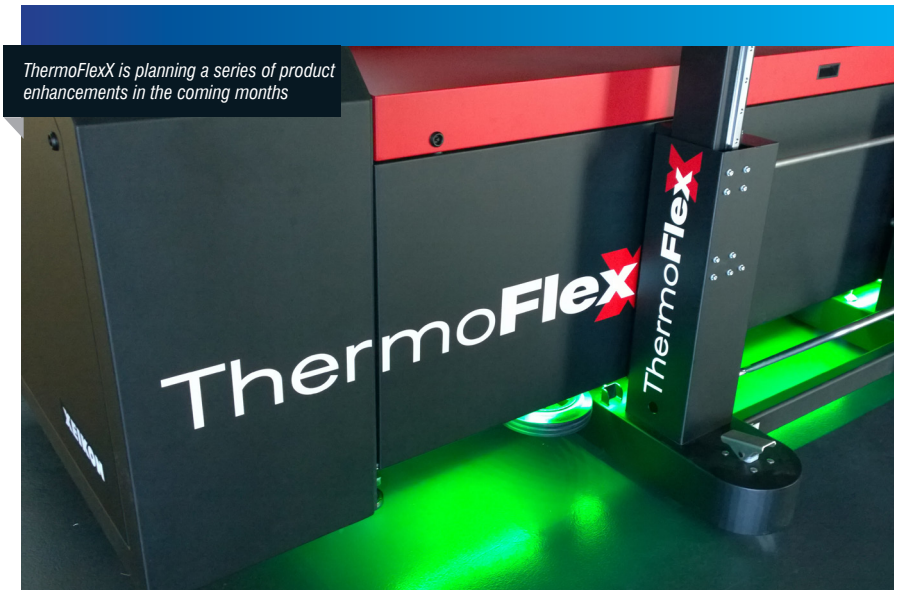
The Tornado-based product feeder (TPF) and print system will be able to perform off-line processing of standard packaging materials including coated and uncoated cardboard, corrugated board and paper stock, as well as other packing materials such as metallic foils and plastics. The system will be designed to feed, align, print, cure and stack with minimal user intervention and greatly shortened job set-up times.

Howard Baldwin, vice-president of sales at Fujifilm Dimatix, said: 'The synergy of material handling, printing and LED curing together will deliver an optimal industrial solution for both end users and OEMs.'

'Phoseon Technology is excited to support BDT's TPF system by providing leading-edge UV LED curing capability,' added Chad Taggard, vice-president of marketing at Phoseon. 'The combination with Fujifilm Dimatix and BDT showcases how industry leaders can work together to enable customers higher productivity solutions with improved quality.'

Ralf Hipp, vice-president of print media handling at BDT Media Automation, concluded: 'We are very pleased to be cooperating with Fujifilm Dimatix and Phoseon, two market leaders in their respective fields, to bring the TPF system to market. This development will bring the best of material handling and UV digital printing to package manufacturers.

'Our goal is to enable higher shop profitability by enabling our customers to achieve unprecedented packaging job flexibility.'



ThermoFlexX is planning a series of product enhancements in the coming months

THERMOFLEXX DETAILS DEVELOPMENTS TO BUSINESS

ThermoFlexX has outlined some of the corporate and product developments since its launch at drupa 2012, including those designed to 'provide a total pre-press solution for the flexo market'.

At a press event at its manufacturing headquarters in Belgium, entitled ThermoFlexX Revelation, sales and marketing director Christophe Lievens spoke of the enhancements the company has made since parent Xeikon acquired FlexoLaser and the ThermoFlex brand from Kodak, such as the launch of the ThermoFlexX 80 at Labelexpo Europe 2013.

This product is to be further developed later this year with the launch of a new dual-head imaging feature alongside redesigned versions of its 60 model.

The dual-head imaging feature, available from August, will enable output speeds of 12 sq m an hour at 2,400dpi, making the ThermoFlexX 80 the fastest flexo imager in the world, the company said. Each ThermoFlexX imaging unit allows imaging at five different resolutions, with the imaging speed dependant on the specification of the system, and a maximum resolution of 5,080dpi achievable although at a lower speed of six sq m per hour with the dual-head system, or three sq m per hour in single-head configuration.

The latest model is equipped with a state-of-the-art imaging concept that consists of three independent modules – the motor, laser and optics. The newly designed optical system offers improved imaging quality.

ThermoFlexX has also created FlexTray, a mobile table that is used during the loading and unloading of plates to minimize the chances of plate damage.

ThermoFlexX is in the process of redesigning its 60 model, with 60 S and 60 D product launches scheduled for later this year. A FlexTray sized for the 60 models will be introduced also.

Aside from hardware, ThermoFlexX is to launch Multiplate 4.0, the latest version of its software for processing digital data. This will include the ability to support multiple imposition sheets plus different resolutions on the same sheet, while the new database will provide job tracking, filter, search and improved archive functions. It will be able to be integrated with workflows and ERP systems as well as external equipment such as cutting tables and mounting devices.

As well as enhancing its own products, ThermoFlexX has formed partnerships and working relationships with the likes of Swiss cutting specialist Zund, AV Flexologic and Hybrid Software in order to develop an ecosystem for the flexo pre-press process. ThermoFlexX said these developments represent an important strategic move that provides customers with a host of new ways of improving efficiency in the pre-press department.

Lievens said: 'This gives us the ability to handle with great effectiveness every element of flexo pre-press, from design, screening and ripping using Hybrid Software's ground-breaking Packz and Cloudflow suites, exposure on a ThermoFlexX imager, cutting on Zund equipment and mounting via an AV Flexologic system.'

Both Hybrid Software and Zund were present at the Revelation event, demonstrating their technologies, such as Zund's S3 M-800 and Hybrid Software's new PatchPlanner module for the corrugated market.

To extend the availability of its products, which are already used worldwide by those producing flexible packaging, folding cartons, corrugated packaging and labels, ThermoFlexX has added resellers in India, America and Portugal, with plans to add more across Europe, Asia and Latin America.

Over the summer ThermoFlexX has created a technology center, offering customers the opportunity to bring their own flexo plates and have them exposed and processed in the factory. ThermoFlexX experts are on hand to examine results and provide advice on finished plates, which can be taken away by the customer to print test on their own presses.

Lievens said: 'The flexo industry has made great strides over the last few years in terms of quality and market share, with several commercial litho printers installing flexo presses. In 2012 some people questioned the wisdom of Xeikon International, best known for producing digital presses, moving into the flexo industry with an imager product.

'However, the industry has proved to be largely resistant to the recession, which was one of the reasons for the move, and with Xeikon already a major player in key areas such as packaging and labels ThermoFlexX was immediately in an ideal position to serve these markets. We anticipate that the synergies between the two will become greater while our customers will increasingly be the same companies.'

Lievens added: 'It's an extremely exciting time to be involved in the flexo industry, which is moving away from traditional analog processes at an ever greater pace. Experts estimate that globally nearly 50 percent of flexo plates will be produced digitally during 2014 and many predict a four percent annual growth over the coming years.'


Premium
CONDENSED
TOMATO
SOUP

Is life imitating art?

If image changes, shorter runs and quicker turnarounds are becoming your new reality, it's time to consider web offset.

The push for more SKUs, faster turnarounds, later image files, and the need to maintain a unit price regardless of run-length are placing margins under pressure. Goss web offset presses offer capabilities that can turn short-run jobs into sustainable, profitable ones.

The Goss Vpak™

High productivity, fast makereadies and low-cost plate production can make web offset significantly more cost-effective than both gravure and flexography. Print quality reinforces the case for web offset, with greater color control, image flexibility and a standardized, repeatable process. The ability to handle a wide variety of substrates, including those as fine as nine microns, at high speeds is also a big advantage. Add in variable sleeve technology and numerous options for integrating flexo, gravure and even digital stations and the result is a solution combining all the economical and quality advantages of web offset without any compromise.

GOSS

www.gossinternational.com

NEWS

Specialty Packaging Technologies is targerting new opportunities in packaging

POUCH BUSINESS TARGETING NEW OPPORTUNITIES

Precision Color Graphics launched Specialty Packaging Technologies earlier this year as a business focused on customized premade pouches, and with the aim of targeting new opportunities in packaging driven by format changes and emerging end-user trends.

Precision Color Graphics itself is a pre-press, printing and packaging company, with Specialty Packaging Technologies focused on flexible packaging manufacturing of customized pre-made pouches, including spouted pouches, initially for markets in the Americas with plans to capitalize on opportunities worldwide in the near future.

It utilizes the latest innovations and technologies in specialized pouch production equipment from Karlville, with all production to be handled in-house for quick turnaround and orders of every size.

Precision Color Graphics said the move into the manufacturing side of flexible packaging is a natural progression from its current business model, and allows it to be vertically integrated and offer the 'complete package' to its existing customer base and grow their businesses into new, more diverse markets.

Under the leadership of Tony Cherot as president and Jane Dirr as vice-president of business development, Specialty Packaging Technologies' product offering is intended to provide advantages in shelf appeal, consumer convenience, brand recognition, economical price points and eco-friendly options.

'Establishing Specialty Packaging Technologies and vertically integrating into pouch and bag making was a natural progression for Precision Color Graphics,' said John Goeden, president of Precision Color Graphics. 'We continuously focus on the needs of our clients and see this as a positive enhancement to our current business. We're very excited to have an executive team with over 60 years of experience at the helm in Tony and Jane.'

In an exclusive conversation with *Packprint World,* Specialty Packaging Technologies stated that 'there is absolutely a demand for premade pouches in consumer product goods, retail food and beverage, personal care and HBA products, pet products, medical applications and beyond.

'Pouches can serve as a primary or secondary package that is lightweight, recloseable and offers a billboard for product branding. In addition, the spouted pouch is an ideal replacement for a rigid bottle, especially convenient for refill applications, offering a varied selection of closures and other features, such as custom shapes that enhance the shelf-appeal or provide a convenience function, such as a handle.

'We see great opportunities for the spouted pouch in so many markets. With the development of unique closures, shapes, and additional convenience features it is just a matter of time before the market recognition gets up to speed. At Specialty Packaging Technologies, we are very well equipped to handle such growth.'

SYMPHONY MAKES GAINS IN PRODUCTS

Symphony Environmental Technologies has confirmed details of a number of major activities related to its d2w controlled-life plastic technology that have occurred so far in 2014, including a biodegradable development project with a multimillion dollar global consumer products corporation on one of its key product lines.

d2w is its brand for controlled-life plastic technology which is designed to control and shorten the life of normal plastic products and packaging. d2w is an additive formulation which is added to normal plastic at the extrusion or casting stage of manufacture.

Other d2w activities reported so far in the first six months of 2014 include the successful completion of first phase PET film development and a major fertilizer company in Pakistan adopting d2w in all polythene bag liner applications.

Symphony Environmental Technologies added that a number of high-quality sales leads are moving towards completion from several market sectors including food, chemical and agricultural.

Symphony Environmental Technologies also confirmed movement in its d2p anti-microbial plastic technology, such as entering into a development agreement with a 50 billion USD global polymer corporation, end users launching new finished products incorporating d2p, successful trials for post-harvest fruit applications in laboratory tests for rice and cheese packaging applications, successful tests for foamed mattresses and FDA bread packaging application approval expected by the end of 2014 . FDA food contact approval is already in place for repeated use treated articles such as chopping boards and containers, with non-food applications approved for use in some EU countries and expected shortly in the US.

Symphony Environmental Technologies expects to announce its interim results for the six months to June 30 in September, with revenues expected to be approximately 5.7 million USD.

LANDA MOVES CLOSER TO LAUNCH

Specialty chemicals group Altana and Landa Corporation have concluded an equity financing agreement under which Altana will invest 100 million EUR (135 million USD) for a minority stake in Landa Digital Printing.

The two companies said they 'see the agreement not only as a financial investment, but also as a starting point for a long-term strategic partnership to bring digital printing solutions to the commercial, packaging and publishing markets'.

The proceeds will be used for completing the development of Nanography, Landa's water-based digital printing process, including engineering and production ramp-up of printing presses and building of manufacturing plants for Landa NanoInk colorants.

Altana is expected to be an active partner, drawing on print industry expertise gained from its divisions including BYK Additives & Instruments, Eckart Effect Pigments, and ACTEGA Coatings & Sealants.

'We are extremely excited to be partnering with an industry visionary like Benny Landa,' said Dr Matthias L. Wolfgruber, chief executive officer (CEO) of Altana AG. 'We speak the same language in terms of innovation.

'I am confident that we are investing in a game-changing technology that can enable the printing industry to thrive in the 21st century and help our customers position themselves well for the future.'

Benny Landa, chairman and CEO of Landa Corporation, said: 'We see our alliance with the Altana Group as a key milestone for our company and a strong vote of confidence in our mission to bring digital printing to mainstream commercial, packaging and publishing markets.'

This agreement marks the third strategic partnership made to bring Nanotechnology to the global printing market. Komori provides the platform for sheet handling and EFI will develop front-end software. Altana brings 'the last piece to the puzzle' with financing, and back-end support and global manufacturing ramp-up expertise.

'Altana is an amazing company,' said Benny Landa. 'There's a great cultural fit and we're thrilled to have the deal. The company is a strategic investor with expertise in our markets – in fact, we're already using some of their materials – but they're not in any competing markets either, which is ideal. They have experience in scaling up huge global manufacturing facilities, and that is something that we'll have to do, so we'll leverage this.

'Without funding we haven't completed the picture. They are an essential piece of ramping up the infrastructure, the last piece to the puzzle – and now we are ready to race to market.'

HUHTAMÄKI PREPARING FOR GROWTH

Huhtamäki has outlined its plans for growth following the acquisition of India's Positive Packaging and the evaluation of its films business.

Huhtamäki has entered into an agreement to acquire Positive Packaging, a privately owned flexible packaging company with nine manufacturing facilities in India and the UAE, as well as significant business in Africa and other export markets.

Huhtamäki will acquire Positive Packaging for a debt free purchase price of 247 million EUR (336 million USD).

It said this is further evidence of its implementation of a strategy of 'quality growth', and strengthens its position in fast-growing emerging markets.

Huhtamäki Oyj chief executive officer Jukka Moisio said: 'I am extremely pleased to announce this acquisition. It further enhances our position in India and provides us with much improved access to the fast-growing markets of Africa and the Middle East.

'Many of our global customers are investing heavily to grow in these markets, and now we are even better resourced to help them grow.'

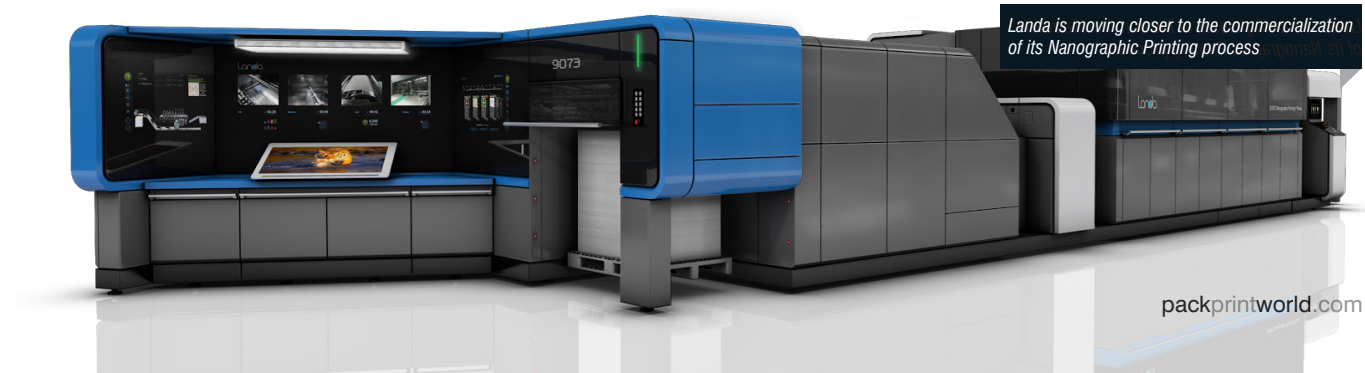
'Together with Positive Packaging, Huhtamäki will become a leading flexible packaging provider in the fast-growing emerging markets,' said Shashank Sinha, executive vice-president in Huhtamäki's Flexible Packaging business segment.

'With the acquisition we expand our flexibles manufacturing into the Middle East and double our sales in Africa with an unmatched footprint. In addition, Positive Packaging's expertise in high quality printing and cylinder making, as well as its strong focus on innovations, are a perfect fit for Huhtamäki's growth strategy.'

As a result of Huhtamäki's growing strategic focus on food packaging, the company said it has decided to evaluate options regarding the group's Films business unit. A potential outcome of this evaluation is divestment of the films business.

In announcing Huhtamäki's interim results for the first half of 2014, Moisio said: 'Our organic growth this quarter was seven percent against our target of five percent. Our good pace in the emerging markets continued and we achieved 12 percent organic growth. Given the continued economic uncertainty in many markets, I am particularly pleased that we have stayed well on our course.

'Our pipeline of ideas and projects continues to be good in terms of new product development, bringing them to market as well as new businesses. The hard work of our acquisition team was rewarded as we were able to announce the acquisition of Positive Packaging early July. Positive Packaging is a good fit to our strategy of quality growth and emerging market positions.'



Landa is moving closer to the commercialization of its Nanographic Printing process

The new XL 145 was shown running cartons at 18,000sph

The new XL 162 was shown running at 16,500sph with multiple coaters and extended drying facility

Big is better

big and fast is even better

Nick Coombes attended an event at Heidelberg's production facility in Wiesloch-Walldorf, Germany, where it showed the latest high-speed versions of its Speedmaster XL 145 and XL 162 presses to carton converters, and to uncover the rationale behind these new VLF presses

In welcoming more than 200 carton converters to the world premiere of its latest large format XL presses, Heidelberg board member Stephan Plenz says that market demand for added performance has been the driving factor behind the development of the new Speedmaster XL 145 and XL 162 presses. The days of carton presses running at what then seemed high speeds of 12,000sph are long gone and even 15,000sph is insufficient to satisfy the demand of major global brands, he suggests.

'We have customers who need the capacity to print more than 75 million sheets a year – that's why we have developed a large format carton press capable of 18,000sph – an unimaginable speed only a few years ago – and I expect demand will continue for even faster speeds.'

For a sheet-fed offset press manufacturer that until relatively few years ago was scarcely involved in the package printing market, Heidelberg has come a long way. Today, according to Plenz, carton presses account for a rapidly growing proportion of overall sales, and almost 70 percent in what it calls its VLF (very large format) sector. Designed to address a market requirement for lower cost per sheet and greater production flexibility, the XL 145 and XL 162 presses claim to offer shorter make-ready times, lower waste levels and higher net outputs than other large format presses on the market.

With well over 500 print units sold, which equates to more than 100 presses, and the production hall at Wiesloch-Walldorf stacked up with orders running beyond the end of 2014, Heidelberg claims that not only is the worst of the global recession behind us, but that the company has a dynamic future in prospect for package printers. Indeed, independent sources predict that the package printing sector will grow globally by more than three percent each year from 2014 to 2020.

Assessing the market

Industry research into cartons showed two distinct sectors with differing production requirements. There is the sector that produces standard products in high volume, where unit cost is the key, and then there is the sector that specializes in added value.

And it is for this reason that Heidelberg offers its new XL 145 and XL 162 in differing base specifications. The XL 145 is available with top production speeds of 15,000, 16,500 and 18,000sph that broadly equate to 30, 50, and 70 million sheets a year, depending on shift patterns.

For the XL 162, the numbers are 15,000 and 16,500sph, which likewise equate to 30 and 50 million respectively, but on a larger format sheet. The company showed performance statistics for a range of substrates from GC 1 with a PE coating through kraft board to GD 2 that supported its claims, and in the case of a 6-color XL 162 was sufficient to surpass the GATF Acceptance Test and in 2013 elicit the comment, '…not only passed, but on many tests produced data that is considered to be extraordinary'.

One part of high performance, in terms of quality, is the gloss level that the latest series of presses can achieve. Typical of many carton press installations is the double coater usage, which, according to Heidelberg has pushed net output speeds

Stephan Plenz says that the new presses were developed in response to customer requests for high speed, and added that he expects demand for even higher speeds in carton production to continue

from an average of 9-10,000sph up to the maximum printing speeds of more than 15,000sph. Calculated to produce 3,000 extra sheets per pile, Heidelberg says that a double coater specification may well become the norm for carton presses in the future. It brands this high performance output under the PSP (Packaging Speed Performance) banner, which includes a new high speed suction head on the feeder, improved sheet guiding and an impression nip blower, high speed grippers on the delivery, rear edge suction and a high speed chain guide.

Driving the market

Outlining the company's strategy towards the changing market for package printing, Plenz says that success starts at the beginning of the value chain. In a market where annual sales of the top 10 consumer companies is estimated to be worth 640 billion USD, and the top 10 pharmaceutical companies account for 350 billion USD of sales each year, the prize for getting it right is the best stimulus for not getting it wrong.

There are, he says, three major drivers for achieving a competitive advantage: lower prices, differentiation and global expansion, depending on the size of operation. These are achieved by increasing efficiency, creating new products and global availability, and each requires a high degree of reliability and sustainability. Key to Heidelberg's strategy is the total package of equipment it can offer the carton converter, from pre-press to finishing. This 'one-stop shop' facility is seen as key to developing the most effective workflow.

The latest presses feature new touchscreen and the familiar wall screen control, with a color and quality management system to suit any business model. Prinect Inpress Control offers spectral measurement, Prinect Inspection adds in-line PDF comparison, and Prinect Image is still the only control system that measures the entire sheet. This means that irrespective of the shape and size of the print control strip, consistency is guaranteed and, importantly, a one percent board saving can be made. With run lengths shortening, and pressure from environmental quarters to reduce wastage, the large format presses come into their own.

Converting the market

In addition to running print demonstrations on XL 145 and XL 162 presses and showing how quickly they could be changed over from one job to another, Heidelberg was keen to show off its new Dymatrix XL 145 CSB (cutting stripping blank separating) die-cutting machine, running with the new Dyset XL optical feed system that is claimed to improve feed register accuracy and provide stable sheet travel at maximum speed. The result is greater net production figures, with fewer wasted sheets. The event in Wiesloch-Walldorf also offered the opportunity for Heidelberg to show its new Diana Smart 80 folder gluer. Designed in response to customer demand for a mid-performance range, the Smart series (in 60cm, 80cm and 115cm sizes) slots between the introductory value range of the Easygluer 100, and the performance Diana X 80 and 115 models.

With ink migration such a hot topic in the food packaging market, Heidelberg's latest range of Saphira inks is designed to meet EU Regulation 1935/2004 for primary packaging. As demand for printed packaging continues to rise in the global food market, the need for low migration products becomes more evident and complex. In addition to inks, there is demand for low migration dispersion coatings, dampening solution additives, wash-up solutions, cleaners, oils and glues. Odor and taint are the culprits in food packaging, but these have to be conquered without any loss of visual impact if brands are not to lose vital shelf appeal. According to Heidelberg, all Saphira products meet these criteria and are the subject of ongoing formulation development.

The cost of market demand

If the overall event showed nothing else, it proved a more than ample demonstration of the problems posed by today's rapidly changing demand for printed packaging, the effects this is having on carton converters and how machinery manufacturers are having to direct their research and development departments to respond. Carton press printing speeds have doubled in the past seven years, and with this has come added requirements for faster make-ready, and improved control of color and waste. Downstream, the pressure on die-cutting and gluing has brought new machines with higher performance. And still, Heidelberg insists there is more to come. As the market continues to polarize between the major international groups and the smaller bespoke operations, all machinery manufacturers need to keep an eye on not only what is desirable to respond to market demand, but also what is affordable. This calculation is not the same for all converters and Heidelberg believes the breadth of its machine range recognizes this, and responds accordingly.

National flexographic associations from across Europe are to work in closer cooperation in order to bring together the European flexo industry under an umbrella organization to be known as FTA Europe

The birth of FTA Europe

David Pittman reports from a meeting of national flexographic associations from across Europe, held earlier this summer

National flexographic associations from across Europe are to work in closer cooperation in order to bring together the European flexo industry under an umbrella organization to be known as FTA Europe.

Representatives of associations from Italy, France, Sweden, Poland, the UK and the Dutch-speaking regions of the Benelux countries met in Brussels, Belgium on June 25 to outline their shared thoughts and knowledge from their respective countries, and to discuss the opportunities of working together to coordinate their activities and initiatives through a representative "voice of the industry". They are all agreed that this is an important step in the development of the flexo industry in Europe and further afield.

The Brussels meeting was hosted by EFTA-Benelux and was a follow-on from a meeting arranged by ATIF, the Italian flexographic association, in Bologna, Italy on November 19, 2013. National associations from Netherlands, Italy, Poland, Sweden, France and the UK were present at this second meeting. The next meeting of FTA Europe is to take place during Emballage in Paris on November 17-20, while a website and logo will be designed and unveiled in the coming months.

FTA Europe has made education and standardization of the flexo process key targets of its initial work in order to enhance and promote the flexographic process as a competitive printing technology, especially for packaging. It will also be undertaking a survey of those involved in the European flexo industry to ascertain what they see as being important topics for the fledgling group to address. Education will also include certification programs.

In a statement, the fledgling association said: 'All across Europe there is a need to stimulate education and training, and to develop initiatives to standardize and harmonize certain aspects of the flexographic process. These two elements are considered to be vital for a healthy development of the flexographic industry.

'Education is important to train your workers and to raise the overall level of the industry. Sharing of training materials and facilities, e-learning and the introduction of a European flexo certificate for operators are examples of what is going to be developed on a European level to support the industry and national associations. The joint development and harmonization of an educational flexographic handbook and guidelines, and the standardization of color measurement are necessary to make sure that the quality of the flexo process is at the same high level everywhere in Europe.'

FTA Europe will act as an umbrella organization for the European flexographic industry with national associations from across the continent as members, supported by industry suppliers. The June 25 meeting was sponsored by Esko, Sun Chemical and Uteco Group. The FTA Europe board is to be made up of nominated representatives from national member associations

Rogier Krabbendam, secretary-general of EFTA-Benelux, used education as an example to describe how this will work in practice. 'As a group we want to raise the overall level of training and education in the European flexographic industry, but it will be those on the ground that are able to organize and deliver the training that will make this a reality.

'This will help create a harmonized level of knowledge and technical competence across the European flexographic industry.'

Krabbendam added: 'Harmonizing the work of the different European flexo associations will provide a way to help the flexo market to continue growing, and to keep the whole market informed about the latest technology developments and process advancements being made.'

FTA Europe is also in contact with the European Commission to position the flexographic industry in Europe and to make sure the interests of the industry are better represented and looked after at an early stage, it said.

Sante Conselvan, ATIF president, concluded: 'FTA Europe is intended for all those in Europe who use the flexo process. Together we are stronger.'

gewuv.com

charged...

...with effective UV energy

The NUVA2 UV Curing System with RHINO Power Electronics

Print **FASTER**
for **LONGER**
with **LESS ENERGY**
and **NO DOWNTIME.**

RHINO®
GEW POWER ELECTRONICS

For further information please contact us on: sales@gewuv.com

UK +44 1737 824 500 **Germany** +49 7022 303 9769
USA +1 440 237 4439 **India** +91 22 2528 5442

GEW
...engineering UV

Bringing the forest to you

Riikka Joukio, senior vice-president of sustainability and corporate affairs at Metsä Group, details some of the work that goes into sustainable forest management.

Finland's natural resources make it ideal for forest industries, and in turn, the value of sustainable forestry to the country's economy is well recognized

At first glance, the words 'bringing the forest to you', as used by Metsä Group, may sound like an exaggeration. It serves, however, as a reminder to everyone of the origins of the group's products – in northern forests, where sustainability is a way of life.

Riikka Joukio, senior vice-president of sustainability and corporate affairs at Metsä Group, says: 'The geography and climate of Finland have led to forestry playing such a vital role in our economy. The pine, spruce and birch that make it their home are perfectly suited for use as timber and in board and paper products. Furthermore, the plentiful supply of water from the lakes and rivers is essential for the paperboard making process.'

As a result, Finland's natural resources make it ideal for forest industries, and in turn, the value of sustainable forestry to the country's economy is well recognized. In fact, in Finland the first steps in legislation to ensure sustainable forest management go back around 130 years.

Respect for forests

There is also an inbuilt commitment to preserving forests resulting from Metsä Group's unique ownership – the 123,000 forest owners who form the cooperative Metsäliitto. Founded in 1934, it celebrates its 80th anniversary this year. Alongside making economic use of the resource, the owners' desire is to preserve the forests for future generations. Respect for forests is integral to Finnish culture, when even city dwellers will spend the summer at the lakeside, and enjoy the recreation and well-being that comes from the woodlands.

'Biodiversity is always taken into consideration in forest operations,' Joukio says. 'Areas in forests important to biodiversity are indicated on digital maps, and used in the cabs of forest machinery together with GPS navigation systems. We leave a proportion of retention trees in the forests bringing ecological benefits. Buffer zones around water sites protect both water and diversity values, and even though fresh water is not scarce in our wood supply, decreasing the impact on water is one of the main environmental targets for Metsä Group. Over many decades we have striven to keep the needs of forestry and nature in balance.'

Avoiding waste

Metsä Group's business portfolio ranges from pulp production to tissue paper, paperboard and wood products, so every part of the cut tree is used. The wood that forms the raw material for paperboard pulp is, in fact, what remains after the straightest and best quality wood from the tree trunk is channelled towards the timber trade – for construction, interiors, furniture and other wood products. It's a strategy that avoids waste, and even parts of wood such as bark and thinnings that cannot be used in products are diverted to bioenergy, replacing fossil fuels with carbon dioxide neutral energy.

'The paper industry was one of the first to take environmental issues seriously. We have invested millions of euros on our manufacturing processes, with year-on-year improvement, and the work still continues,' Joukio notes. 'The forest industry in Finland has a remarkable record in decreasing environmental emissions during the past decades.'

Traceability throughout the supply chain

Metsä Board has not been alone in spreading the word about sustainability, but believes it was among the first to provide traceability throughout its supply chain. 'We want to be open and transparent, and continuously engage in discussions with our customers, NGOs, legislators and other interested parties. We also make much of the information public through our Paper Profiles – an industry-wide scheme – but give added environmental detail in a supplement,' says Joukio. Additional details published by Metsä Board include: the mill where each product is made and it relationship with the surrounding environment; emissions, water treatment and energy efficiency; environmental management systems; the origin of wood, certifications and the species of tree used in the product; methods of transport; supplier code of conduct; and more.

Certification – an important tool

The international forest certification schemes, most notably PEFC (Programme for the Endorsement of Forest Certification) and FSC (Forest Stewardship Council), have had the effect of sharpening up forest management practices, and onwards to the customer through their associated chain-of-custody schemes.

In Metsä Group, forest management and chain-of-custody certifications are seen as excellent tools both to ensure and further evolve the sustainability of the supply chain and forestry operations. 'While only some nine percent of the world's forests hold any form of certification, over 80 percent of the wood in our operations is certified,' Joukio states proudly.

Good practice is now further covered by the 2013 EU Timber Regulation, aimed at preventing the placing of illegally harvested timber into the EU market. It covers both wood and wood-based products such as packaging and paper. Holding a recognized forest certificate does not automatically result in compliance with the regulation, but adoption of the necessary systems helps meet its due diligence requirements.

Lightweighting

Another way of producing more sustainable products has been the concentration by Metsä Board on lightweighting its boards. Lighter weight boards provide significantly more cartons per tonne – even exceeding 50 percent or more. They are lighter to transport throughout the supply chain, resulting in less waste to dispose of at the end of a carton's life. The company also has the advantage of using pulp produced within the group as well as having access to the knowledge of using it. This has aided the development of pulps, including pioneering the use of BCTMP (bleached chemi-thermomechanical pulp), which has the benefit of being pure, strong and light.

The strategy has driven the redesign of its paperboard products and upgrading of mills and paperboard machines, requiring both know-how and investment. It has resulted in both the launch of new lightweight products, such as the Modo Northern Light liner range, and lightweighted cartonboards. Overall, the average weight of Metsä Board's cartonboards has reduced by five percent when companred to the 1990s and 2000s, and 3.5 percent within the last decade to date.

Future challenges

As 91 percent of world's forests are not certified, there is work to be done, Joukio notes.

'We can't be complacent,' she says. 'We are living in a world where there are constant challenges. For instance, forest loss is a serious problem in various part of the world. We see forest certification as a tool to enhance sustainable forest management and therefore we actively promote it, participating in development projects in our operating countries, including Russia.

'One of the global megatrends, urbanization, reflects on our business in Finland. The urban forest owners increasingly look to companies like Metsä Group to manage their forests for them. It builds our responsibility to do so sustainably, and to act as stewards for the benefit of future generations.'

Metsä Group's business portfolio ranges from pulp production to tissue paper, paperboard and wood products, so every part of the cut tree is used

Riikka Joukio, senior vice-president of sustainability and corporate affairs at Metsä Group

Benny Landa presented the science of his new technology at drupa 2012, with developments in the process ongoing

Landa's Latest

Gerry Mulvaney, European sales manager at Landa Digital Printing, details the latest developments at the digital press manufacturer as it moves closer to the commercialization of its Nanographic Printing process.

It is just over two years since Nanography was unveiled at drupa 2012. If like me you were there you will remember the flock of packaging converters and printers jamming the Landa Digital Printing stand each day as Benny Landa presented the science of his new technology to a rapturous audience.

I was part of the sales team looking to recruit initially a small number of those people to a preferred customer program, so we could work closely with them to commercialize Nanography. That small number quickly turned into a large number as over 400 packaging converters and printers from around the world signed up to the program. There was very little hesitation on their part – hearing Benny's explanation of Nanography, confident in his reputation and in many cases having built a successful business around his Indigo technology, they signed letters of intent to purchase a press and placed a deposit to secure their place in the queue. I guess their due diligence process amounted to a couple of hours at most.

Fast forward two years to June 2014 and another major injection of confidence in Benny's reputation, and the team he has built at Landa Digital Printing, has come in the form of a 100 million EUR minority equity investment in the business by Altana, an international speciality chemicals business. While Altana might not be a household name in the graphic arts industry, the company has three divisions that are quite well known: BYK Additives and Instrumentation, ECKART Effect pigments and Actega (Coatings & Sealants). There is an obvious synergy between the two companies' businesses, and when Altana saw digital printing as a strategic area for investment, it led to talks about it becoming the sole investor in Landa Digital Printing. Taking the new technology of Nanography from concept to commercialization requires a substantial investment in research and development, production facilities for presses and inks, as well as a high-class service and support structure to install and maintain Nanographic Printing presses worldwide. Benny has been financing the whole project so far, but Altana taking a minority stake in Landa Digital Printing and injecting 100 million EUR in return is an important stage in the development of Nanography.

The worldwide manufacturing expertise of Altana will also be invaluable in helping commercialize Nanography, something not available from the more traditional investors.

Of course Benny's reputation and that of the team he has assembled at Landa Digital Printing was crucial for Altana, but with an investment of this size and scale so was a very thorough due diligence process. As well as talking to the Landa management, the Altana team have been talking to Landa suppliers and some of those customers, looking closely at the financial forecasts as well as employing their own consultants to stress test the assumptions that Landa had presented. The Altana team came to the same conclusion as Landa's customers: that Nanography is going to be a "game changer" in the graphic arts industry and that they want to play a part in that success. Landa is delighted to have the company onboard, happy that

it shares the same confidence in Benny Landa and the team as the customers who joined our preferred program two years ago. With the Altana investment, but equally as important its knowledge and expertise in the pigments and coatings Industry, we are now focused on preparing for the first beta installations of Nanographic presses in early 2015.

Just before the Altana investment announcement and as part of the process of sharing information in the preferred customer program, I hosted some European customers at the Landa Digital Printing plant in Rehovot, Israel. A number of the customers in the program, in particular those who are to receive the B1 sheet-fed and reel-to-reel formats, which will be first to come to beta test, have already been to Rehovot in recent months and we have been able to show them behind the scenes and answer their questions. During the week I was hosting, we visited the Nanography Lab where the ink, blanket and image transfer process are examined; the R&D Lab where the technologies of ink, blankets and printing are brought together; and the assembly areas where the sheet transport systems from Komori are assembled into the beta sheet-fed Landa S10 B1 format presses, the first of the seven presses shown at drupa 2012 to come to market. The customers were introduced to the key members of the Landa Digital Printing team who shared insights into their responsibilities and at the same time were able to get valuable information in turn from the customers about their particular needs and wants.

Substrates are a subject of particular importance to converters and so the range on show in the ink labs was of great interest to my customers. Not just the mainstream substrates, but Nanographic Printing onto wood and metal caught my customers' attention and there was a prolonged discussion on the very wide range of possibilities for the use of other substrates that Nanography now opens up. Fine resolution, small point sizes, solid colours and a very wide colour gamut are all demonstrated in the latest print samples and the very high quality of the range of print samples now seems to be accepted as a given by those customers who have seen them. The comment from all my visitors was that they were 'as good as offset' and 'very sellable'. This feedback was very satisfying for the lab teams.

Seeing the presses take shape in the assembly area was another highlight for the customers. The amount of work involved in bringing Nanography to market is more obvious when you see it in the flesh and being able to see, touch and feel the presses in the production area was an exciting moment. Of course the members of the preferred customer program have had the benefit of insights not made generally public by Landa, so the fact that the first beta installations dates had been extended was not a surprise to them and they were very pleased indeed to see the current stage of development.

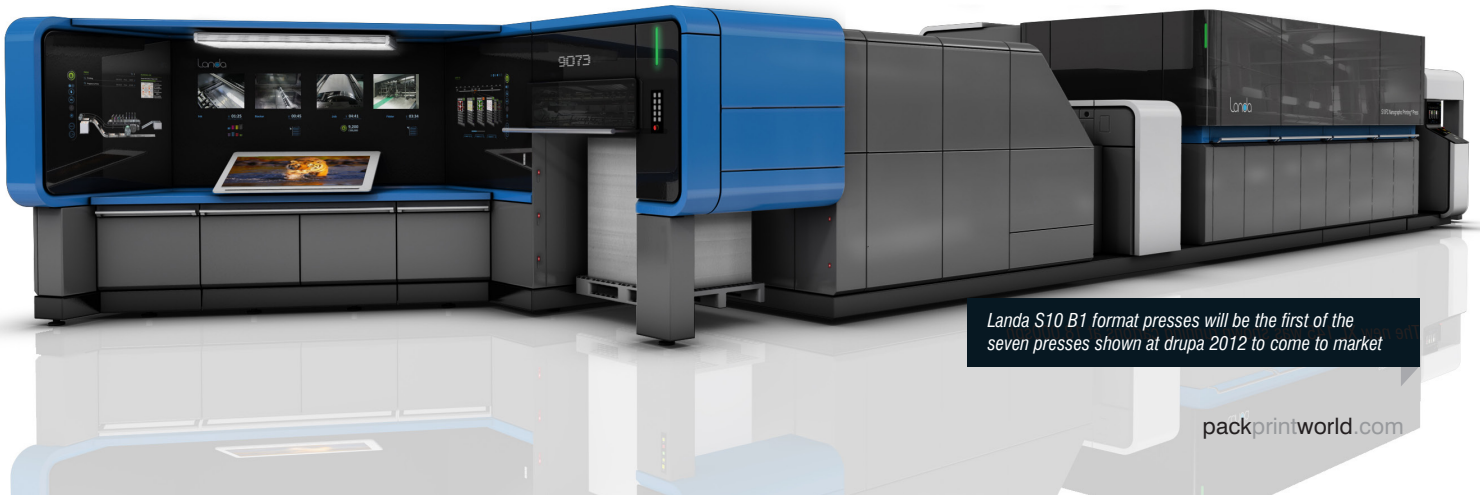
Creation of the new operator cockpit control center was part of the extended development process and seeing the full size working model was another highlight. It never fails to impress me and it always wows those who see it in action for the first time. 'Incredible, space-age and fantastic' were some of the comments this time and preceded an interesting debate about the skillsets and expertise needed by potential operators. Landa has produced a document to assist with selection and this has been appreciated by customers.

Gerry Mulvaney, European sales manager at Landa Digital Printing

Lastly we shared the current stage of our support and logistics planning with the visitors. The 24/7 service and support centre in Rehovot will link worldwide to all installed presses and provide video, voice and data support communication. Some of the augmented reality sequences to help press operators remotely maintain their equipment with help from engineers in Rehovot have been completed, and when those were demonstrated the impact of seeing this technology for the first time was clear to see.

The support of our customers during these visits is hugely important and coupled with the confidence shown by Altana by its investment and equity stake, together with the partnerships with Komori and EFI, cements a very important period in the development of Nanography.

Landa Digital Printing is moving to the next stages of the commercialization of the products with the endorsement of customers, suppliers and investors ringing in their ears.



Landa S10 B1 format presses will be the first of the seven presses shown at drupa 2012 to come to market

Highcon has a demonstration center in Belgium used to showcase the Euclid

Highcon focusing on worldwide expansion

Aakriti Agarwal reports on the ongoing growth of Highcon in the global folding carton market

Digital folding carton finishing specialist Highcon has sold 10 machines worldwide since its inception at drupa 2012, and is working hard towards extending its footprint further.

The Highcon Euclid is the first digital production cutting and creasing machine. The separation of the two processes of cutting and creasing enables a high degree of flexibility, both in design and in production of packages and promotional items, greeting cards, etc. The key innovation is the DART (Digital Adhesive Rule Technology) that produces the polymer crease lines, after which sheets pass on to an array of lasers and optics for cutting.

Set-up is measured in minutes rather than days, and the digital process removes the many hours or days associated with die production combined with the additional machine set-up time. This radically changes the economics, enabling convertors to respond to their customers' needs, meet tighter deadlines and deliver short and medium run length jobs profitably.

> "We at Highcon are constantly trying different materials and substrates"

The laser cutting enables a huge range of design capabilities, cutting across crease line, perforation, versioning with partial cut, or marking, etc.

Highcon says this means that all the advantages of the digital process, up until now found only in pre-press and printing, are now available post-print: immediate error correction and/or changes according to designer or customer requirements, digital storage, a simpler supply chain and a faster time to market.

The primary application of the Euclid is carton creasing and cutting, 'however we at Highcon are constantly trying different materials and substrates from time to time,' says Nigel Tracey, Highcon international sales director.

Some examples of recent application developments include fluted board, 0.25 mm (10pt) substrate and metallic coated board. It has also been shown that self-adhesive label and sticker converting is possible.

'We are sharing the usage data with our partners and customers. For the moment we are focusing on sheet-fed applications and there are vast possibilities in this area,' Tracey says.

Highcon has also developed a Light

Editor software tool that allows last minute editing of crease and cut lines, partial cutting depth control, sharp angled cut control and individual box personalization.

Global sales

One each of its Euclid product have been sold in Sweden, Italy, Israel and Africa, and two each in Belgium, the UK and the US. These sales have been placed through its network of representatives, which includes agents in Belgium, Canada, France, Greece, Italy, Mexico, Netherlands, Scandinavia, Spain, Switzerland, Austria and Lichtenstein, Turkey, and the UK and Ireland.

A number of installations have already taken place, with those to already have commissioned a Euclid, such as Glossop Cartons in the UK (see p20) and Antilope in Belgium, extremely pleased with their investments in digital post-press technology. Further installations are to be completed soon, such as at Sweden's Gafs Kartong, which is to be the first to install a Euclid in the Nordic region.

Tracey says Highcon plans to add more channel partners in the near-future, such as the likes of Monotech Systems in India, a recent addition to its distributor network. T. P. Jain, managing director of Monotech Systems, said: 'We have been tracking the progress and sales of the Euclid around the world since we first saw it at drupa 2012. We believe this a great fit to our existing range of digital products and look forward to showing it to our customers.' Kamal Vyas, vice-president and business head for high-end

"We are a company with a very positive outlook about business"

products, added: 'The future is going to be digital and everything that can go digital will go that way, perhaps at speeds that we can't even imagine. The coming drupa shall be an eye opener in this direction for the industry.'

Aspirations for India

New and emerging markets are where Highcon is increasingly trying to make its presence felt. Highcon appeared for the first time in Asia at the Dscoop Asia event in Bali.

Talking of the growth strategy of Highcon in the Indian market, Vyas says that, 'as it is an innovation as a product and as an absolutely new technology incorporated in the post-press environment, we intend to increase awareness of this product in both the packaging and commercial printing industries, show the benefits to prospective buyers of this product and organize Open Houses for the same end, and then push sales of the Euclid.'

'We are a company with a very positive outlook about business,' adds Tracey, 'and India is a vast market that is going through a period of growth, therefore we see a good future for this product. While concrete figures are quite difficult to predict in such an early stage, we are sure that we will be able to introduce and establish successfully this product in India.'

Pricing is a tricky matter when catering to various markets worldwide, and Tracey says: 'Generally the price of a product is different in different markets in all business areas depending on several factors in the market, like taxation, import duties and so on. Our equipment is not an exception to that.'

Nigel Tracey, Highcon international sales director

Glossop Cartons' staff are said to be enthused by the opportunities presented by the Euclid

One year on: Life with a Euclid

Glossop Cartons in the UK is continuing to benefit from its investment in the Highcon Euclid, as sales director Jacky Sidebottom-Every tells David Pittman.

It was in the summer of 2013 that UK carton converter Glossop Cartons took receipt of its Highcon Euclid, and in doing so became one of the first to begin operating the system for digitally converting cartons.

Glossop Cartons was actually the world's first converter to place an order for the Euclid, although Belgium's Antilope pipped it to the post in terms of having hardware on the ground. Since then, Highcon has announced a series of application developments for the Euclid platform and further converters around the world have made the decision to invest in the system, such as Anro in the US and Sweden's Gafs Kartong. For both Antilope and Glossop Cartons, the decision to invest in the technology has been met by industry-wide recognition.

At Antilope, this has included a prize in the 2013 Pro Carton/ECMA Award competition, with the Box Femme Fatale eau de parfum entry victorious in the beauty and cosmetics category. Antilope Cardboard produced the carton for Mylène, and Marc Binnemans, CEO of Antilope, said: 'I think this is the first time a winner has been chosen because of the value added to the packaging, the simplicity of the design and the uniqueness.'

Glossop Cartons went one step further, with a wine box manufactured using its Euclid claiming a prize in the 2014 WorldStar Packaging Awards beverage category. The award judges said the carton 'demonstrates clearly the creative flexibility of the digital cutting and creasing of the Highcon Euclid', with the intricate cut outs and design features 'unique to the DART process'.

For Glossop Cartons, the prizes have continued beyond application-specific accolades, with the company shortlisted and victorious in a number of industry and business awards.

Its Packaging Superheroes marketing campaign, introduced at the Packaging Innovations show in early 2013, helped the company win a Derbyshire BEST award for Marketing Campaign of the Year, while sales director Jacky Sidebottom-Every received the Outstanding Contribution to Business Award within the Derbyshire and Nottinghamshire Chamber of Commerce (DNCC) Enterprising Women Awards. This was swiftly followed with the Manufacturing Technology Award at this year's North West Business Insider Made in the North West Awards.

Jacky Sidebottom-Every says: 'I'm absolutely thrilled that the business has been recognized for a number of accolades from a broad spectrum of category areas from esteemed industry titles to respected regional business and technology awards.'

These awards have come in recognition of the company's overall strategy and growth ambitions, which extend beyond the Euclid investment. It was the first in the UK to purchase a Fujifilm Acuity LED 1600 UV LED inkjet printer for prototyping applications, and has installed a Lamina FA sheet-to-sheet, fully automatic laminating/mounting machine. A second Lamina FA was recently installed.

'Next on our agenda is to purchase a digital press, but, like a lot of other converters, we are waiting to see what developments will take place in this technology before deciding what to invest in,' she says.

'We need a machine that can handle a variety of substrates, and for the prints to be fully convertible once they come off the press.'

The ability to apply a digital varnish and not needing to pre-coat materials are other requirements Sidebottom-Every specifies in her pursuit of an appropriate digital packaging press for Glossop Cartons, adding that 'price is also a big consideration.

'It has to be cost-effective for us to invest in full-scale digital printing as our customers will not want to pay a premium because their packaging is digitally printed without an added value benefit.

'A digital press is likely to be our next big investment though, and this will complete our digital offering, allowing us to truly offer all the benefits that digital can offer to our customers – speed to market and responsiveness through printing and finishing.'

For now, the Euclid remains the focal point of Glossop Cartons' recent investments, and a big part of its future.

'Being an early adopter of this technology means we are fairly unique in being able to offer certain services to the UK and European market and we are able to capitalize on advances in the technology, such as being able to convert fluted substrates. This monopoly won't last forever, but we are gaining from it at the moment as we are able to have different sales conversations with customers. Our workforce is enthused too, as they are realizing the creative and operational benefits a machine such as the Euclid offers us, so the whole business is benefitting.'

Meet us @ Labelexpo

Booth 6135

9 - 11 September · Chicago

LABELEXPO AMERICAS 2014

www.labelexpo-americas.com

HOW WOULD **XEIKON** WORK FOR YOU?

See the proof. For free.

Digital is quality made versatile. Profitability made sustainable. Think: top-quality labels, packaging or documents and a personal approach. But seeing is believing. So let us show you the proof. Order your free sample based on your own design.

SEETHEPROOF.COM by

XEIKON

Upload your designs & get your free Xeikon printed files in return.

On **SEPTEMBER 9-11** label and package printing explorers from across the Americas and the rest of the world will descend upon **LABELEXPO AMERICAS 2014** – the industry's largest event this year.

Join other converters, brand owners and designers to discover new opportunities in this growing market, see the latest technology in action and learn how to stay ahead of your competitors.

But come prepared – there are over 400 exhibitors and only three days to see it all!

- **16 CONFERENCE SESSIONS**
- **INKJET TRAIL**
- **PACKAGE PRINTING WORKSHOP**
- **SMART MART**

9 - 11 September • Chicago

LABELEXPO AMERICAS 2014

Start your adventure today at: **WWW.LABELEXPO-AMERICAS.COM**

Nosco implements On_Demand production

Nosco is the first converter in North America to install the new HP Indigo 30000 digital carton press, writes Danielle Jerschefske

For 81 years Nosco, a privately held, employee-owned business based in northern Illinois, has supplied the greater healthcare market – pharmaceutical, medical device, natural health, personal care, bio tech and OTC – with folding cartons, labels and inserts. Since 2004, the printed packaging specialist has led the integration of digital printing within its business to transform the traditional supply chain standards.

Today the company ships 650-700 digital orders per month, which demonstrates the strength of the digital print proposition. Brand owners are interested in the ability to alleviate issues associated with ordering conventionally printed packaging: inventory control, obsolescence, lead times, color management and quality.

With its success and growth in delivering digital print offerings to the US market, in 2013 Nosco opened a Greenfield site in Bristol, Pennsylvania, a densely populated area for healthcare packaging. Aptly called the On_Demand Solutions Center (ODSC), the facility is dedicated to digital print production. The plant's manufacturing workflow is based around the first HP Indigo 30000 digital carton press in North America with B2 formatting.

Craig Curran leads sales and marketing at Nosco, and says: 'The region is a place where we can leverage the work we can do with digital. Our customers have pain points in the short to medium segment of the business. Digital printing plays well on the label side and we feel that the technology will perform just as well on the carton side.'

According to HP Indigo, only eight percent of package printing produced globally is digitally printed, and this is mostly labels. There are massive opportunities to capitalize on. Working in partnership with the HP team, Nosco has empowered itself to take a leadership position in innovation.

Nosco has wisely leveraged the capabilities of digital print by focusing on the ability to streamline the supply chain, eliminating plates and reducing make ready time. It has taken the standard lead-time model and offer expedited service. Turnaround time, inventory, waste in set-up and waste due to obsolescence and defects are greatly reduced.

Process variation is kept to a minimum. The converter greatly appreciates the consistency of HP Indigo ElectroInk color. In fact, the color produced by ElectroInks are so accurate, that in the wake of the successful Share a Coke campaign in Europe last year, Coca-Cola has adopted the ElectroInk Delta E as a standard for its own color reproduction around the world. The press is capable of offering four- to seven-color process with a match of 97 percent of colors in the Pantone book.

Well-trained, in-the-know people support the converter's on-demand model. Nosco's sales force is considered packaging advisors. A team of technically savvy associates that understand digital technology, and how to use it properly reinforces them.

'We've always tried to be a leader in innovation,' Curran concludes. 'It is our goal to provide, defect-free products and services, on time and in compliance to our customers.

'Digital allows us to change the conversation.'

Nosco is the first converter in North America to install the new HP Indigo 30000 digital carton press

The Xeikon 3500 at Colebourne

Making cartons digital

Experienced packaging converter Colebourne & Partners has begun a new venture in digital printing. Carol Houghton reports.

Colebourne & Partners has never been afraid to invest. Four decades ago, Peter and Margaret Colebourne established the business as a wholesale packaging company for bakeries and green grocers. A few years on, it saw an opportunity to move the business into the ethnic takeaway market and took the risk of investing in equipment for mass production of solid board lids for aluminum food containers. From there, the business built up a strong reputation for quality, service and reliability, producing around 90 million digital units a year.

Now under the management of the family's second generation, Colebourne & Partners has installed a Xeikon 3500 to instigate its move from converter to printer. It is thought to be the first and only dedicated digital producer of folding cartons in the UK.

Decision making

Sadly Peter Colebourne passed away in 2001, prompting his son Guy to return to the family business – based in Wiltshire, UK – as managing director, to continue the legacy.

Until 2013, Colebourne outsourced all of its printing to a local offset printer. Aware of the limited flexibility and the long lead times incurred by this arrangement – and acting on customer feedback – the company looked into and evaluated purchasing its own printing press several times. However, the price and/or equipment didn't seem to match up to requirements.

As the popularity of digital grew and the technology developed, Colebourne began trials with what it believed to be the two leading digital press manufacturers: HP and Xeikon. The company had a particular interest in how digital technology could reduce its customers' exposure to redundant inventory, as the requirements of the food industry are constantly changing and packaging was printed well in advance.

According to Guy, the HP reached higher printing speeds but width restrictions and the need to pre-coat made it less suitable to Colebourne's needs.

A deal was agreed upon at drupa 2012, and the Xeikon 3500 press was installed in April 2013 as part of a totally new set up at Colebourne headquarters, using all new equipment in a project amounting to 900,000 GBP. Guy explains: 'We listened to our customers; the food to go sector is extremely fast moving and they needed a supplier that can keep pace in this ever changing market.'

The vast majority – 98 percent – of Colebourne's business is food packaging, most of it coming into direct contact with food. Much of this food will be prepared in an oven, with the Colebourne lid on, usually at 160 degrees C for up to an hour.

Xeikon toner at Colebourne

Managing director Guy Colebourne (left) and Nick Muckley, operations manager, with the Xeikon 3500

For this reason, Colebourne prints on food grade ovenable boards using FDA approved toner. A polyester laminate is added on the finishing line to act as a protective barrier between the food and its packaging. Guy Colebourne says this was another key factor in the decision of which press to invest in, saying: 'We have to be sure our products are certifiable for direct food contact, Xeikon's toner is approved to be used with food packaging and our varnish and adhesives are Swiss Standard Low Migration '.

After some initial teething problems Colebourne's digital production line now runs 50,000 – 75,000m a week. Printing roll-to-roll on the Xeikon has also delivered benefits Guy had not anticipated. 'There are efficiency gains and waste management benefits from using reels. The space on the substrate is used in the optimal way whereas with our previous sheet-fed operation, the design needed to be fitted on – which created extra waste. We can also now use different width substrates – maximum 520mm down to 300mm – which minimizes waste and optimizes design'.

The flexibility of digital is well suited to the food industry, allowing changes to be quickly made so that the right information is provided all the time, without waste. Guy estimates that Colebourne previously had 15 percent waste due to design changes or new regulations, now the amount of stock written off due to legislation changes is minimal.

Colebourne has also realized significant savings on operational overheads as the reduced space requirement for a digital operation enabled it to downsize from a 17,000 sq ft factory to a 4,500 sq ft building which was previously used as a customer warehouse.

Although there are typically no limitations to orders with digital printing, Colebourne implements a minimum order of 250 pieces due to the requirements of shrink packaging. This is still a significant reduction to the previous minimum order of 12,000.

Guy says the digital project is a combination of his product design and new media background. He is enjoying having 'total control' since moving pre-press – including web development and database using his own admin system – and printing in-house. He estimates it now produces a shade under 90 million units a year.

Asked what he would have done differently in switching to digital, Guy Colebourne suggests the company should have spent more time fully testing finishing. 'Let's say we learnt what not to do,' says Guy. He adds it would have been beneficial if Xeikon had provided 24-hour customer support to help Colebourne in the initial set-up; we hit the ground running with a lot of volume. To be fair to Xeikon they did respond to our needs and set-up an American support number as an interim solution. Duncan Sargeant, sales manager for labels and packing at Xeikon, notes: 'We are working on improving the support we provide customers.'

Persuading customers

'Digital is an unusual pitch,' says Guy Colebourne. 'It is more expensive than conventional printing but the benefits are clear; simpler time management and planning for print on demand, quick response times and flexibility. These all also add up to cost and waste savings.

'We needed to identify where costs could be saved and the extra opportunities digital would provide to persuade our customers about the original premium – generally this is about expanding or personalizing their product offerings.'

Digital technology allows Colebourne to print only what is needed, when it is needed. It now has total control of print jobs, which naturally greatly improves lead times. Previously, the company had to work 8-12 weeks ahead, now it can print and deliver the next day. Guy says: 'With the digital capabilities we can manage all our customer needs and react quickly to them. And that's before we've even got to the fun bit – there are new opportunities for customers to explore'. Other opportunities include the ability to easily and cost effectively handle changes and variations such as marketing promotions, which would disrupt a conventional operation.

Guy claims the move to digital has 'rid the headache' of printing using analog methods. 'It is a simpler, more integrated way of working as the purchase order goes direct to the press.

'Colebourne has also gained new customers since going digital.' He believes this is because the industry is no longer controlled by cost; 'it is about getting professional, high-quality packaging and digital is the only way to achieve this.'

He adds: 'Digital empowers the customer; our proprietary software has a lot of wizardry that enables our customers to manage their brand, artworks, content and order processing online which simply makes their lives easier.' Colebourne is working with customers to see how they can best use the new equipment and take advantage of the opportunities it provides. One customer and its designer recently spent a trial day on site at Colebourne, testing different colors, designs and product branding configurations etc. There were obvious benefits for the designer being able to test and instantly see the results.

The future

Colebourne plans to invest in another press soon and sees a natural progression into the pharmaceutical arena, although this will require more accreditations.

'The vision is to enable premium printed packaging for the masses', e.g. small to medium microbrands. We want to make premium printed packaging for any business on low volumes – plain is boring.'

Further, Colebourne and Partners is currently a UK operation but Guy is quick to add: 'At the moment.'

Bograma demonstrated a sheet-fed BSR 550 rotary system cutting printed sheets using flexible dies

Dry toner takes on package printing

Xeikon Café Packaging Innovations outlined the digital press suppliers' options for various types of package printing. David Pittman reports

Spring's Xeikon Café Packaging Innovations at the digital press manufacturer's facility in Lier, Belgium outlined its dry toner technology's potential in various package printing environments, with digitally printed cartons one of 15 application examples demonstrated during the event.

This saw a Xeikon 3500 equipped with CMYK and Durable Clear toner printing on Iggesund Incada Exel 235gsm in a roll-to-sheet configuration, similar to as seen in the Package Printing Workshop feature area at Labelexpo Europe 2013. That set-up included a Bograma unit positioned directly after the press for in-line converting. Bograma was in attendance at Xeikon Café Packaging Innovations as a supplier partner exhibiting its services and products to attendees. This included a sheet-fed BSR 550 rotary cutting printed sheets using flexible dies.

Bograma was one of 28 supplier partners at the event from across the package printing supply chain, from material suppliers Iggesund and Treofan to cutting and creasing specialists Highcon and Kama.

Other suppliers at the Xeikon Café Packaging Innovations came from each point of the label printing supply chain, such as Actega and Treofan to Hybrid Software, Michelman and Advanced Track & Trace. AB Graphic was also in attendance and running a Digicon Series 2 converting line, with UV varnish, screen printing, foiling and embossing being added to pre-printed wine labels.

Many of these presented as part of a technical conference program that traversed the three-day event and addressed a range of topics directly related to their company's operations. This covered workflow and pre-press, substrates and inks to finishing and converting.

In total, Xeikon's event detailed the role of its dry toner digital press equipment in a range of labels and packaging applications, 15 in total from pharmaceutical, heat transfer and in-mold labels to folding cartons and paper cups, and included various models from its press portfolio, including the 3500, 3300 and 8800, running and printing work.

A business conference program also provided a handful of real-world examples of converters using Xeikon technology, including C&P Packaging, which produces folding cartons.

Xeikon recently outlined its growth plans for digitally printed folding cartons. Xeikon has made a number of developments in its technology in relation its folding carton suite, including the launch of the Alpine fuser drum and the Durable Clear toner, which it said has made its technology better suited to folding carton printing. It has also introduced a five-color variant of its 3000 series featuring orange and CMYK, which is being offered as a standard configuration to folding carton printers.

Filip Weymans, business development manager for labels and packaging at Xeikon, says: 'Our strategy is to pursue growth in the folding carton market. At the moment, self-adhesive labels account for around 75 percent of our business, with the other quarter attributed to heat transfer, in-mold label and folding carton printing. Our intention is to grow our folding carton market presence, and to make it as big as self-adhesive labels.

'There is a great opportunity in digital folding carton printing, and the Xeikon Café Packaging Innovations will provide an informal knowledge exchange platform covering the different aspects of digitizing print production.'

Xeikon said that, in total, the Café Packaging Innovations event attracted over 350 visitors from 48 countries, including delegations and representatives from Asia, the Middle East and across Europe.

A Xeikon 3500 in a roll-to-sheet configuration was shown at Labelexpo Europe 2013, with a similar set-up on show at Labelexpo Americas 2014

Pack printing at Labelexpo Americas 2014

Package printing will be on show at Labelexpo Americas 2014, from new feature content and conference sessions, to technologies suitable for the narrow web market. David Pittman reports

The return of Labelexpo Americas 2014 to Rosemont, Illinois promises to present many new and exciting opportunities to the narrow web printing market, including those tailored to package printing, and designed to provide label printers and converters the opportunity to target new markets and enhance their productivity.

A growing number of label converters are looking to markets such as flexible packaging as a way to augment their offering to their customers and to brands through new services and capabilities, as a way to add value to their existing relationships, and to create new ones.

Package printing will be found across the show floor, from machinery manufacturers talking about the capabilities of their equipment to print and convert more than just labels, to consumables suppliers proving the suitability of their inks, coatings and more for things like direct food contact environments, as typically associated with primary packaging.

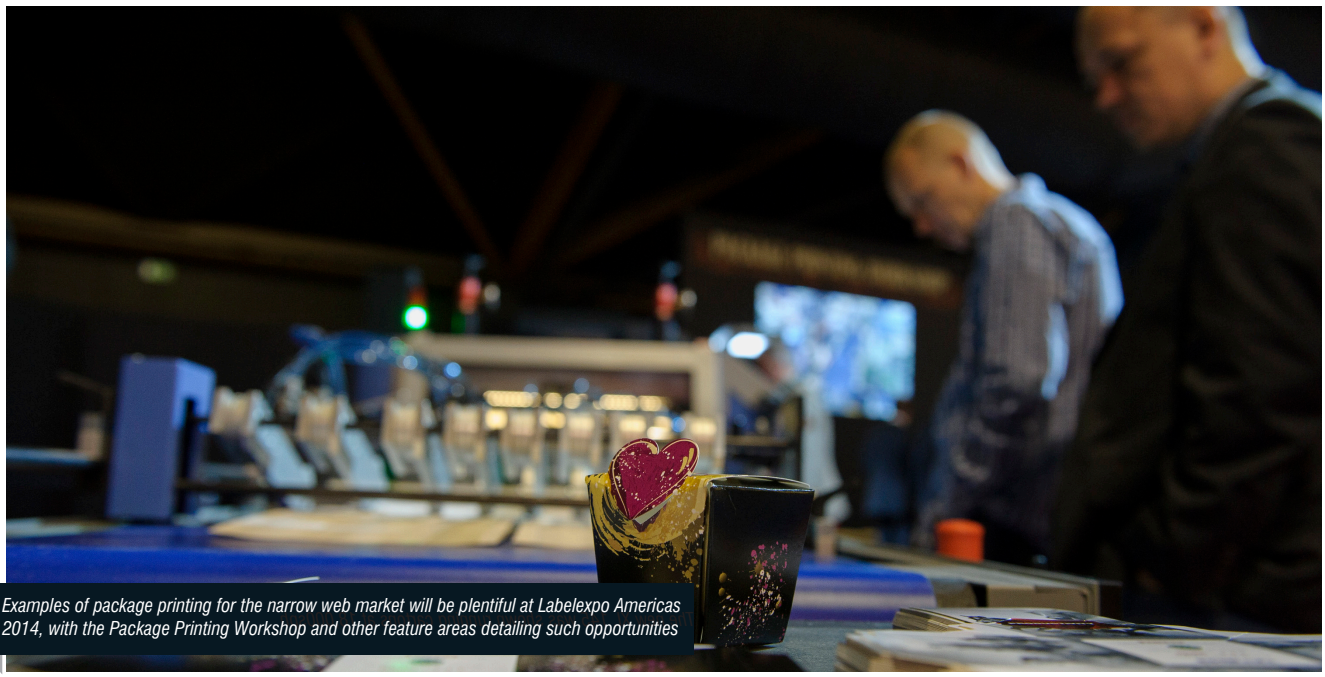
Among the exhibitors, HP Indigo's stand will host a Digicon 3000 finishing line, developed by Edale and AB Graphic, and designed to work in-line with its new 20000 model, being shown for the first time. Goss International is to promote its Goss Vpak 500 and Vpak 3000 web offset press models for folding carton, flexible packaging, pre-print and label applications, with new options for integrating flexo, gravure and digital stations.

Mark Andy is to show its own Digital Series hybrid press, configured with 6-color UV inkjet printing (CMYKOV + W) with top-coating and fully integrated inline modules including flexographic printing, various converting options, cold foil, screen and more.

Vetaphone is showing its latest iCorona generator and two VE1A corona treaters with ceramic electrodes and Esko is launching Suite 14, while GMG is showing its OpenColor color management system, enabling proofs to be produced that both represent pure spot colors precisely and simulate their complex overprinting behavior.

Kodak will demonstrate its Flexcel NX high-definition plate system, Prinergy Powerpack workflow and Spotless flexographic system for spot color replacement. For packaging that

Mark Andy is to show its new Digital Series hybrid press



Examples of package printing for the narrow web market will be plentiful at Labelexpo Americas 2014, with the Package Printing Workshop and other feature areas detailing such opportunities

incorporates digital print features, Kodak will also discuss possible applications for its Prosper S-Series imprinting systems and the new Kodak Prosper 6000 Press. DuPont Packaging Graphics is introducing the Cyrel FAST DFUV flexographic printing plate, part of its Cyrel FAST thermal workflow system. DFUV is a thermal process plate designed specifically for shorter print runs using UV inks on high priced stock where minimizing the start-up waste is essential.

Sun Chemical is introducing its global Solaris System, a complete line of inks, consumables and coatings for a wide range of narrow web applications including self-adhesive and in-mold labels, wrap-arounds, shrink sleeves, tubes, and food and pharmaceutical packaging. Also on display will be the SunInspire sensory coatings line, plus live demonstrations of the SunLase laser marking technology.

Collins Inkjet is launching a full series of low migration inks for packaging and label applications including water-based, UV, LED and EB curable inks. Eckart America Corporation is also showing new inks with RotoStar metallic LED UV inks and Rotostar UV shrink-sleeve gold ink, both designed for the narrow web and mid web markets.

RotoMetrics and Rollem International are showing new products for converting. For RotoMetrics, this includes the through-hardened, machine-finished RD300 solid die. RD300 is designed to cut disposable medical substrates, dust-sensitive labels and tags, in-mold labels, synthetic gasket materials, Velcro, Tyvek and electronic components. Rollem International is launching the Delta, a new class of rotary sheet-fed die-cutting system. The Delta will die cut, kiss cut and score a wide range of applications from both offset and digital presses.

Berhalter is launching its PRElaser technology. A typical application is multipack yoghurt lids, which can now be pre-perforated using the PRElaser system, so the yoghurt pots can be individually snapped off and separated without the lid being unintentionally removed. Berhalter will also demonstrate its inline inspection system directly on the die-cutting machine, allowing defective material to be passed through the tool area without being punched.

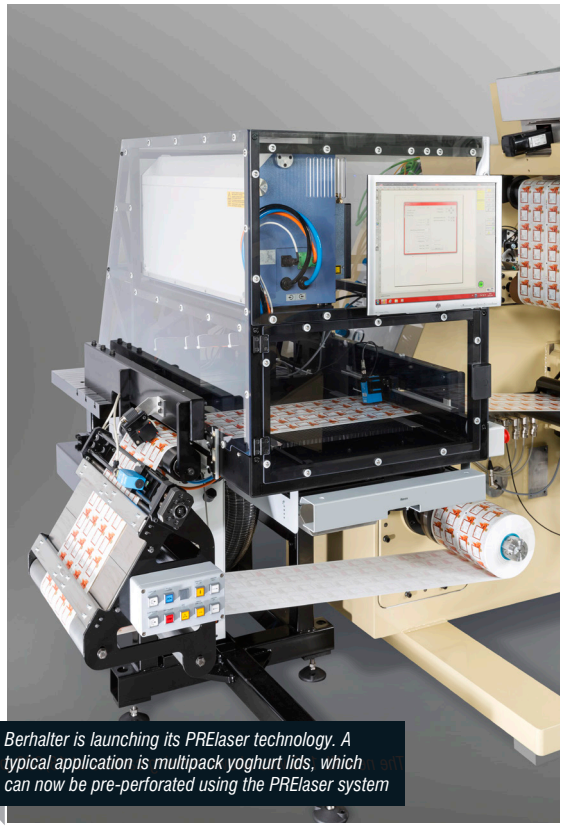
Another to see is Multi-Plastics, which is expanding its flexible packaging line to include coated polypropylene films from Jindal Films and laminated pouch materials. Examples of the company's patent-pending, EZTear lamination structure will also be on display.

Package Printing Workshop

Central to the whole presence of package printing at the show will be the Package Printing Workshop feature area, which carries the tagline 'How to add package printing to your portfolio'. The program in this feature area includes live machinery demonstrations from Xeikon and Delta Industrial, detailing the processes and knowledge needed to print and convert folding cartons and flexible packaging, as well as presentations explaining what is on show, and an opportunity to interact with experts in this growth area of the packaging market.

Xeikon will showcase the digital printing of carton packaging using a 3500 model digital press equipped with a digital varnish print station applying Xeikon's Durable Clear toner. It will also explain and demonstrate what is needed to produce personalized packaging and how workflow can be organized to optimize manufacturing. Additionally, Xeikon will look at brand protection and how possible security features can be integrated into folding cartons.

The Digicon 3000, co-developed by Edale and AB Graphic, will be seen on the show floor at Labelexpo Americas 2014



Berhalter is launching its PRElaser technology. A typical application is multipack yoghurt lids, which can now be pre-perforated using the PRElaser system

Delta Industrial will feature its Mod-Tech converting and packaging technology for advanced medical and added-value converting applications. This will see a converting line 'construct' a transdermal patch in a foil pouch. The complex patch will be made of a challenging polyurethane and feature multiple die cuts. The system will have a variety of features to support in-line film and parts converting: corona treater, semi-rotary island placement, knife bullnose, male/female embossing, a spreading conveyer, web re-registration to die vision inspection and reciprocating heat seal packaging.

Package Printing Workshop sessions will run for one hour at 11:00 and 15:00 on each day of the show, and can be attended free of charge and without pre-registration. The Package Printing Workshop feature area is located in Hall F at the Donald E. Stephens Convention Center.

Further features of interest

Alongside the Package Printing Workshop feature area, Labelexpo Americas 2014 will feature a number of other feature areas of interest to those with thoughts on package printing.

Smart Mart has been designed to 'offer a glimpse into the supply chain, retail and convenience stores of the future', with attendees able to experience first-hand how the latest advances in substrates, inks, digital systems and printing are changing consumers' expectations of labels and packaging.

For instance, Avery Dennison will showcase its FiberTracker anti-counterfeiting system that uses a paper facestock with unique fiber patterns that can be scanned at the point of purchase to validate a product's authenticity. This is combined with a QR code to match the unique fibers with the correct image retrieved from scanning.

Blippar will display the possibilities of digital engagement through its mobile application that allows users to explore interactive advertising through augmented reality and image recognition. Brand logos or the Blipp symbol can be designed into packaging for users to unlock all kinds of additional content from a brand.

T+sun, created through the partnership of Sun Chemical and T+ink, will exhibit its conductive ink solutions to make packages and objects communicate, engage consumers, manage inventory systems and provide brand authentication solutions.

In addition, Clemson University will demonstrate its eye tracking technology, which can assist both designers and brand managers with rebranding tactics, and shopper response and reach schemes.

Conference program

The Labelexpo Americas 2014 conference program will include further information around package printing.

A dedicated stream on day two of the conference program will look at cutting-edge materials and the importance of matching the process to the substrate, and transitioning from labels to flexible packaging and from other packaging formats to flexibles and cartons.

The third day of the conference program is given over to the 'Brand engagement through packaging: a printing technology' masterclass, intended to provide brand managers and product marketers with details about the latest labels and package printing technologies to improve shelf impact, increase sales and engage consumers. This session will feature talks from Mike Ferrari of Ferrari Innovation Solutions, EskoArtwork's director of solutions management Jan De Roeck and Mike Fairley, director of strategic development for the Labelexpo Global Series. The workshop will be held on the final day of the show from 09:00-14.00. The participation fee is 700 USD.

LABELEXPO NEWS IN BRIEF

WORKSHOP TO HELP BREWERS DIFFERENTIATE THEIR BRANDS

The Craft Beverage Day workshop to feature as part of the Labelexpo Americas 2014 program will help brewers 'differentiate their beverage brands from the competition', according to the show's organizers.

The Craft Beverage Day is a dedicated workshop specifically for craft breweries, wineries and distilleries and will feature a tailored conference, networking lunch and tour of the show. Tasha Ventimiglia, event director for Labelexpo Americas, said: 'There has been huge exponential growth for the country's small and independent craft brewers over the last few months. With the rising popularity of craft brewing and growing number of breweries, the craft beverage workshop will really help brewers differentiate their beverage brands from the competition.'

CONFERENCE SPEAKER LINE-UP

The organizers of Labelexpo Americas 2014 have detailed the speaker line-up for the two-day conference that will run alongside the show. The conference schedule features four panel discussions, including a CEO panel discussion, a panel exploring the Internet of Things, a converter panel and an editorial panel.

Pre-booked conference sessions cost from 135 USD and reservations can be made online at www.labelexpo-americas.com. Entry to the exhibition is free when one or more conference sessions are booked and further discounts apply for multiple bookings and for association members of TLMI, ACOBAN, AIMCAL, AMETIQ, FSEA, FTA and TAPPI.

BRAND ENGAGEMENT THROUGH PACKAGING

Brand owners, retailers, label and packaging designers, and buyers are invited to enroll for the Brand engagement through packaging masterclass taking place on September 11, which will include a combination of speaker sessions, a guided show tour and hosted lunch.

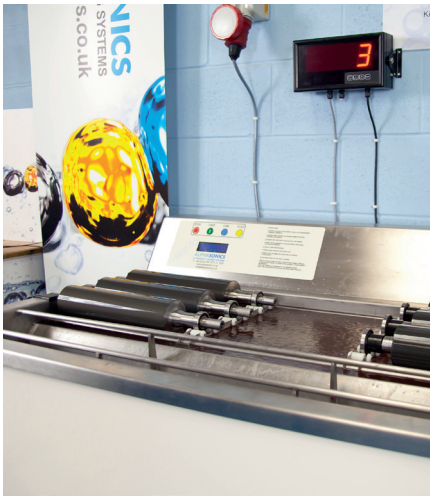
It is designed to give attendees a robust understanding of label and package printing, such as which materials to use, the effects of using the latest technology and design techniques to grow a brand, increase sales and stay ahead of competitors. Entry to the masterclass costs 700 USD. Delegates can register online at www.labelexpo-americas.com.

ALPHASONICS
ULTRASONIC CLEANING SYSTEMS

Supported by

Troika TROIKA SYSTEMS LIMITED · PAMARCO · INOMETA

Future proof anilox, plate and parts cleaning technology is here



Our cutting edge **Dual Frequency Alphasound**™ and **Betasound**™ technologies provide proven safe and effective cleaning on even the highest screen counts giving 100% clean aniloxes, parts and plates 100% of the time.

No ifs. No buts. Simply consistent and thorough cleaning that enhances production quality.

View the Alphasonics 5 Day Anilox Cleaning Trial 'Safe with Sound'

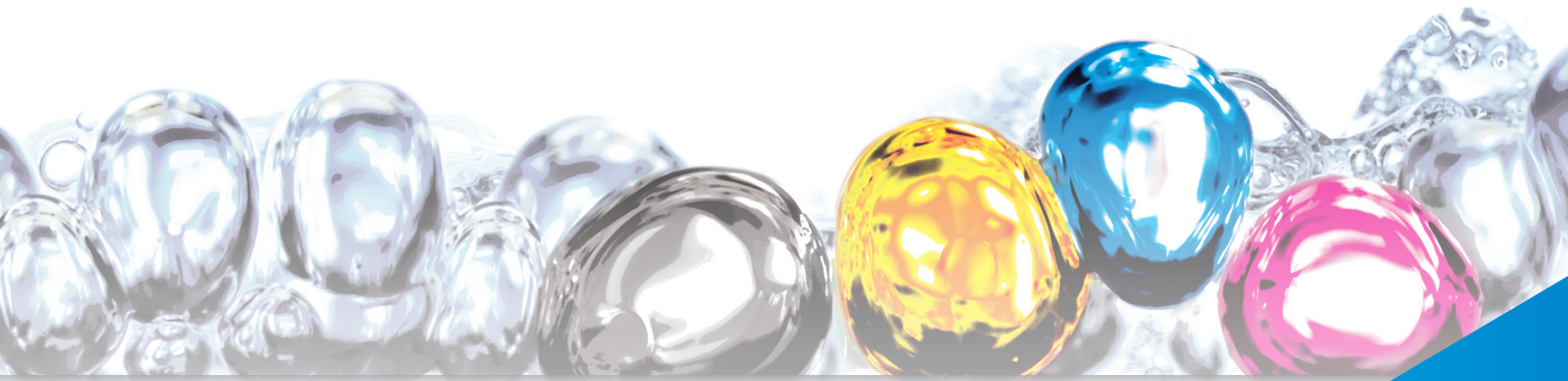
Alphasonics carried out a live stream showing their anilox cleaning technologies in action.

For 5 full days, 3 brand new and 3 ex-production anilox rolls were subjected to continuous cleaning - **over 1300 cycles** - all captured around the clock on CCTV cameras, and broadcast to over 600 viewers. The rolls were independently inspected by Mr. Jon Jordan of Troika Systems, using their AniCam anilox measuring system, both before and the trial.

Mr. Jordan confirmed that zero roll damage had occurred and paid testament to the cleanliness of the aniloxes.

View the trail now on YouTube. Search for **'Safe with Sound'**

ALPHASOUND a world of difference · BetaSound Ultrasonics. Advanced. · active CAVITATION



ALPHASONICS
ULTRASONIC CLEANING SYSTEMS

18 Caddick Road, Knowsley Business Park South, Knowsley, Merseyside L34 9HP United Kingdom
Tel: +44 (0) 151 547 3777 • Fax: +44 (0) 151 547 1333 • **www.alphasonics.co.uk**

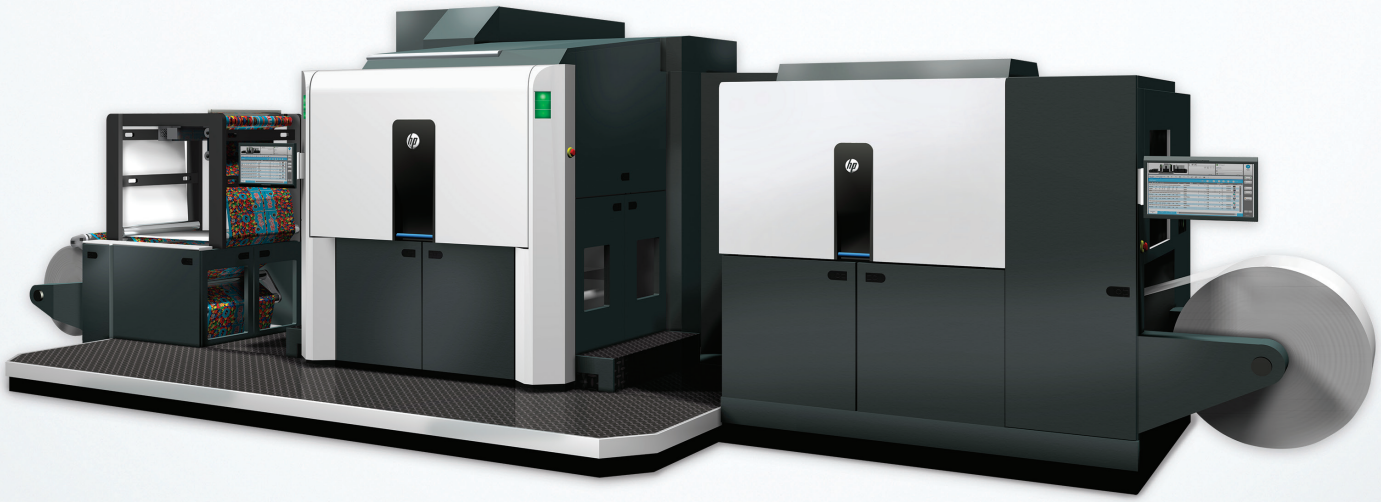
Find us at Booth: 3011
9 - 11 September · Chicago
LABELEXPO AMERICAS 2014
www.labelexpo-americas.com

Game changer

Combining high-quality color with the efficiency of digital printing, HP Indigo will take your business to the next level.

Engineered for mid-web packaging applications such as flexible packaging and label printing, the HP Indigo 20000 Digital Press is a superior alternative to analog technology. It brings the same quality as gravure to your operation so you can meet all your client demands for medium and short runs, whilst minimizing your operational costs. Grow your business with the HP Indigo 20000

Find out more at **hp.com/go/hpindigo20000**



Live demonstrations in the new Print Technology Center featured two jobs running on the VSOP – a pouch for nuts and a shrink-sleeve for a beverage

The VSOP is not a new concept, but it is still considered cutting-edge in terms of what it offers the package printing market

Web offset makes mark in pack printing

Müller Martini marks its 50th anniversary in 2014, and Nick Coombes attended the company's celebratory Open House in Maulburg to see what the company has to offer today's package printing market.

'We are dedicated to offset printing and have recently completed a six million EUR investment plan to make Maulburg a state-of-the-art manufacturing, training and demonstration facility – I'd call that making a serious commitment to the technology and the markets we serve,' say Müller Martini managing director Bernd Sauter.

The technology design

The VSOP (Variable Sleeve Offset Press) is not a new concept, but it is still considered cutting-edge in terms of what it offers the package printing market. The press on display at the Maulburg Open House had a 850mm web width, and was fitted with six offset print units and two flexo stations, with the first offset unit being a convertible hybrid allowing offset or flexo. There were three options for curing/drying: full UV, electron beam and a hot air unit on the second flexo unit.

Specified to run flexible packaging and labels (there is a CB version for folding carton production), the VSOP 850 is designed for producing primary packaging, where the contact with food is direct, and the potential for ink migration is high. The modular construction allows each converter to specify the precise combination of printing and drying/curing technology that its customers' products demand. The substrate range runs from paper (30-200gsm) to film (9- to 150-micron) and foil (10- to 50-micron), with laminate foils up to 300gsm. Each of these can be fully tested at Müller Martini's new Print Technology Center, which was hosting the Open House.

The technology in action

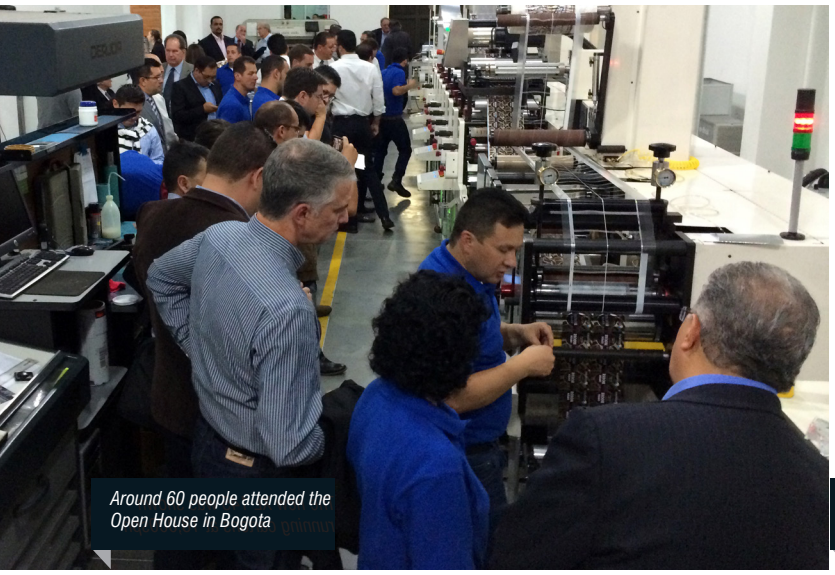
Live demonstrations in the new Print Technology Center featured two jobs running on the VSOP –a pouch for nuts and a shrink-sleeve for a beverage. The pouch was printed on a 520mm wide roll of 38-micron Treofan with 20-micron stochastic screening. The 26in format image was printed CMYK offset with a flexo opaque white and reverse printing. It was EB cured and run off at 200m/min. The press was then stopped and changed over to run the sleeve. This was also a 26in format, but printed on the full 850mm wide web on 12-micron Bilcare PET, again with 20-micron stochastic screening. Printed CMYK plus Reflex blue offset, with an opaque flexo white and reverse printing, it was also EB cured and run off at 200m/min.

The future for food packaging

The Open House also featured a panel discussion on the problems involved with primary food packaging addressed by two experts – Dr Ulrich Hebring from the Hebring Institut, and Dr Heinz Schweiger, of Zeller + Gmelin. Dr Hebring explained that ink migration had come into the public conscience only in the past 10 years, and largely as a result of some high profile legal cases. While legislation exists to monitor and control the situation, he said there are many gaps, and that consumer expectation is currently far outstripping supply chain capability, which needs better coordination both up- and down-stream. There is, he said, no room for secrecy.

Dr Schweiger reminded the audience that new legislation is due to come into force in Germany in 2016, and it is anticipated that it will flow out to the other EU member states. Described in simple terms as a standardization of Good Manufacturing Practice (GMP), it recommends that converters 'check, check, and check again, because of the number of variables, including changes in the environmental conditions under which the packaging is produced'. More obvious practices like 'don't mix low migration with other inks on the same press' strikes at the heart of GMP, but it is, he said, alarming how little some food packaging producers actually understand, and that ignorance is no defence in the eyes of the law.

Dr Hebring added that some types of print techniques are clearly better suited than others for primary packaging. The combination of ink type, curing or drying method, and print process all bring different variables, but he commented that there is no reason why, as long as strict control is enforced, most types could not be used safely. Converters, he believes, need to become more scientific in their approach so they can manage the risk more effectively. In a flexible packaging market for so long dominated by rotogravure and CI flexo printing presses, the growing capability of web offset brings a new and welcome approach. It is both commercially viable and, crucially, environmentally favourable. Most of all, it brings a new level of flexible production capability that today's rapidly changing market for packaging demands.



Around 60 people attended the Open House in Bogota

Colombia's Impresos & Acabados showed in-line production of coffee cartons on a Nilpeter press

A sample of the coffee carton as produced at the Open House

Impresos & Acabados shows off Nilpeter press

Colombia's Impresos & Acabados showed in-line production of coffee cartons and multiple-substrate coupon labels on a Nilpeter press at a recent Open House. James Quirk reports

Impresos & Acabados, a Bogota, Colombia-based folding carton and label converter, hosted around 60 visitors at an Open House event held the day after Label Summit Latin America 2014. Invited by Nilpeter, the attendees – who came from Colombia, Paraguay, Ecuador, Chile, Uruguay, Guatemala, Mexico, Peru, Venezuela and Argentina – witnessed demonstrations of in-line production of coffee cartons and multiple-substrate coupon labels on a Nilpeter FB-3300S flexo press.

The 8-color Nilpeter roll-to-roll flexo press is equipped with hot air dryers, four UV lamps, a double in-feed system, corona treater and suction web cleaner. It was installed at Impresos & Acabados to meet a pharmaceutical customer's need for multilayer coupon labels.

The folding carton printed at the Open House measured 14 x 8 x 3cm, and was printed, die-cut and sheeted in-line on 200g cardboard, and was laminated with 10-micron metallic film produced using a four-color process with coating. The coupon label was attached to a 125g bag of coffee, which was placed in a box for each visitor. A barista from local company Café Cultor was on hand to fill the bags and freshly printed cartons with coffee beans, while giving visitors a taste of various blends.

Support also came from other industry suppliers: Esko equipment handled the pre-press operations, Nazdar provided the inks, RotoMetrics sent dies and solid cylinders for the folding carton job, Avery Dennison provided the labelstock and Daetwyler supplied the doctor blades. Impresos & Acabados used its own carton material.

Previously dedicated to sheet-fed offset printing, Impresos & Acabados' move into flexo label production has been a success. Today, coupon labels represent the majority of the converter's flexo business, as well as wrap-around carton labels for yogurts. Colombian graphic arts association Andigraf awarded Impresos & Acabados the 2013 Best of Flexography Labels award for its 14pt carton stock label for Gloria yogurt.

'I believe that we have proven that it is entirely possible to make the leap from sheet-fed offset to roll-to-roll flexo,' says Luis Fernando Herrera, production director of Impresos & Acabados. 'In our case, the flexo press has allowed us to expand our market reach by adding coupon labels and wrap-around carton to our capabilities. The press is constantly fully booked.

'We are more than pleased with the Nilpeter press and the support that it has provided us in making the transition into flexographic printing and multi-ply labels. We're excited to invite regional converters to our facility to see what the machine is capable of producing.'

The business is further expanding into other material conversion. With the support of Avery Dennison, Impresos & Acabados is producing polypropylene, one-directional film to wrap around a squeeze tube container for cosmetics, health and nutraceutical products.

'Our flexo presses allow the printer to reach completely new segments,' says Jesper Jorgensen, global sales manager at Nilpeter. 'It was exiting to sense the enthusiasm at the event. No doubt, these types of packaging and label applications could help many of the converters gain a competitive advantage.'

Juan Pablo Patiño, manager of the Andean region for Nilpeter, adds: 'This kind of event is very important because it allows converters to see different types of production which they can employ in their own markets. Impresos & Acabados is a reference point for the whole of Latin America in multi-layered coupon printing, and it's very important that local companies like this are growing in the region and being supported by manufacturers like Nilpeter.'

Patiño reports that Nilpeter has installed more than 30 presses in the Andean region, and says that throughout South America's Andean countries – Peru, Colombia, Ecuador, Venezuela and Bolivia – there is a trend towards increased local production, with lower quantities of packaging and labels being imported. 'As a result, the number of press installations is rising. We at Nilpeter have shown commitment to the region by opening our own local offices, with our own technical service, rather than operating through agents.'

ALIVE with TECHNOLOGY

Come and witness the launch of the next generation of printing presses from the leading manufacturers and be among the first to see them in action.

LABEL PRINTING HAS EVOLVED

Learn how cutting-edge technology, innovative new materials and intelligent labels are revitalizing in-store sales; be the solution your clients need. Secure new business, while reducing your operating costs, increasing your profits and expanding your services.

Competition is fierce, tame it at the largest label and package printing event in South Asia.

29 Oct – 1 Nov • New Delhi

LABELEXPO INDIA 2014

www.labelexpo-india.com

Register for **FREE** entry today at:

WWW.LABELEXPO-INDIA.COM

Biome Bioplastics has led a research project with the University of Warwick that has successfully demonstrated the feasibility of extracting organic chemicals from lignin

Replacing fiber with bioplastics

Biome Bioplastics CEO Paul Mines discusses developments in bioplastics.

Plastic comprises more than half of the packaging we use today, and with good reason. It is low cost and highly versatile. It protects products whilst allowing sellers to advertise their brands and connect with their customers. However, these benefits come at a high environmental cost, with vast amounts of packaging ending up in landfill.

Bioplastics provide a viable alternative, removing the environmental impact without removing the packaging. Bioplastics tackle both ends of the lifecycle of packaging; manufactured wholly or in a large part from materials derived from biological sources, they can also be designed to biodegrade or compost at the end of their useful life. Bioplastics can usually provide a direct substitute for their oil-based equivalents and can be engineered to perform similarly to standard industrial plastics.

Bioplastics have traditionally been associated with short-life, low-value packaging products. They have predominantly been produced from starches, which are made up of long chain carbohydrates that occur naturally in plants such as corn and potato. These carbohydrates are easy to remove from the plants and produce a plastic that easily biodegrades at the end of its useful lifetime. As a result, starch-based bioplastics are widely used in disposable products such as plastic bags, wrappings and other short-life packaging.

More recently, other natural products such as cellulose have been used to produce bioplastics with improved mechanical properties. As the main structural component of plant cell walls, cellulose produces bioplastic with increased rigidity and higher melting points. These products are increasingly used in an impressive range of applications across the catering, cosmetics and personal care sectors. At Biome Bioplastics, these high performance product ranges give us access to markets where the higher cost of bioplastics is outweighed by demand for sustainability credentials and end-of-life performance.

Modern bioplastics allow brands to deliver convenience and design alongside environmental responsibility. Last year, for example, Biome Bioplastics helped to develop the materials for a biodegradable coffee pod, offering one of the first sustainable packaging alternatives in the single-serve market. With the popularity of coffee pod machines increasing rapidly, and an estimated 9.1 billion single-serve coffee and drink cartridges ending up in US landfill every year, this innovation demonstrates the pivotal role that bioplastics can play in delivering sustainable packaging options.

Despite advances in technology and the clear sustainability benefits of using bioplastics, the bioplastic market still remains small compared to that of fossil fuel-based polymers. Estimates

Biome Bioplastics helped to develop the materials for a biodegradable coffee pod, offering one of the first sustainable packaging alternatives in the single-serve market

Paul Mines, Biome Bioplastics CEO

"Bioplastics are two to four times more expensive than the traditional materials they replace"

In the next phase of the research, Biome Bioplastics intends to examine how the yields of these organic chemicals can be increased using different bacteria

of the total global market size for bioplastics vary widely from 100,000 to 1.2 million tonnes. To put this in perspective, the UK alone uses around five million tonnes of oil-based plastics every year.

The problem is simple: bioplastics are two to four times more expensive than the traditional materials they replace. In some applications where sustainability credentials are highly prized, or the packaging is a very low cost component of the whole product, cost is not an issue and bioplastics have taken hold. But many packaging applications are highly price sensitive. Solving this issue is more complex: if the bioplastic market is to reach its full potential, manufacturers need to tackle the intrinsic synthesis of bioplastics that currently limits performance and keeps costs high.

The primary challenge is the availability of low cost chemical feedstocks. Although bioplastics are based on natural materials, some oil-based chemicals are widely used in their manufacture to convey properties including mechanical strength, tear resistance and durability. Deriving these chemicals from a plentiful, natural source could significantly reduce costs, expand functionality and increase performance in bioplastics, enhancing their ability to compete with conventional oil-based plastics.

Funded by the UK's innovation agency, the Technology Strategy Board, Biome Bioplastics has led a research project with the University of Warwick that has successfully demonstrated the feasibility of extracting organic chemicals from lignin, the complex hydrocarbon that helps to provide structural support in plants. As a waste product of the pulp and paper industry, lignin is a potentially abundant feedstock that could provide the foundation for a new generation of bioplastics.

The research was undertaken in conjunction with the University of Warwick's Centre for Biotechnology and Biorefining, led by Professor Tim Bugg. Together the team has successfully demonstrated that bacteria can be effective in the selective degradation of lignin, and that the breakdown pathway can be controlled and improved using synthetic biology. Crucially, several organic chemicals have been produced at laboratory scale in promising yields that have potential use in bioplastic manufacture.

In the next phase of the project, Biome Bioplastics intends to examine how the yields of these organic chemicals can be increased using different bacteria and explore options for further scale-up of this technology. The first commercial target is to use the lignin-derived chemicals to replace the oil-derived equivalents currently used to convey strength and flexibility in some of our products, further reducing cost and enhancing sustainability.

At Biome Bioplastics we believe that this kind of work will be crucial in unlocking the full potential of the bioplastic market. We anticipate that the availability of high performance polymers, manufactured economically from renewable sources, would lead to a significant increase in the volume of packaging made from bioplastics. It will allow us to produce products that can challenge the dominance of oil-based plastics, and ultimately replace them completely.

Mr Wang Lianbiao, sales manager for KBA China

Challenges and opportunities in the Chinese package printing industry

Kevin Liu reports on a KBA event in China that outlined some of the challenges and opportunities in the Chinese package printing industry.

Koenig & Bauer Group (KBA) has hosted an event in China for the package printing industry, where entrepreneurs in the industry from all over the country gathered to talk about the market and discuss the challenges and opportunities that they face together.

The event, which took place on June 18 at the Sheraton Beijing Dongcheng Hotel, was co-organized by Beijing Academy of Packaging and Printing Technology and Beijing Packaging Technology Association, along with KBA, with the theme of Future led by Packaging Printing. The attendees featured entrepreneurs in the package printing industry from different provinces and areas in China including Guangdong, Hubei, Hunan, Shanghai, Chongqing, Shandong, Hebei, Henan, Tianjin and Beijing, serving various industries such as tobacco, liquor, pharmaceuticals, food, electronics, logistics and tags.

'This event is truly a high-end and precisely-positioned gathering serving leaders from the packaging printing industry,' said Mr Wang Yuezhong, the assistant to the president of China Packaging Federation.

Mr Wang Lianbiao, sales manager at KBA China, claimed that the event broke the mold of mainly introducing products, as typical of such meetings in the past, and was instead aimed at setting up a platform for leaders in the Chinese packaging and printing industries for communication. He also said that by continuously absorbing the latest developments and business models in the industry at home and abroad, and through close communication between the leaders, Chinese packaging printing companies can explore a more optimized business model and be inspired for better development ideas.

Concerns

As mentioned in the 2013 Analysis Report on Press and Publication Industry, the total output value of the Chinese printing industry in 2013 hit a historic high of 1039.85 billion RMB, and ranks second in the world, with a total of 105,000 companies and 3,415,000 employees in the industry, and total assets of 1062.47 billion RMB and total profit of 79.62 billion RMB. In 2013, the gross output of the Chinese printing

Attendees also visited Beijing Henrianne Technology

industry increased by 9.3 percent compared to 2012, which is comparatively slow but still higher than the growth rate of the national economy ever since the growth rate reduced for the first time from two into one digit growth of 9.6 percent in 2011. However, with the slow growth rate of the whole printing industry, the production value of decorative package printing keeps rapidly growing. In 2013, the production value of packaging printing was up to 77.42 billion RMB, accounting for 75 percent of the total printing industry output (in 2009, it was 65 percent).

In spite of the rapid growth of packaging printing, in the meeting the entrepreneurs discussed the common problems faced by everyone, such as intense competition in the industry, increasing costs and decreasing profits.

"The golden age for the industry from 5-10 years ago is now gone forever"

Partly, the decreasing volume of business and profit is caused by the economic environment and national policies. Take printing of tobacco and distilled spirit packages for example. Mr Lv Wei, deputy general manager of Shenzhen Jinjia Group, said: 'Everyone has been talking about how the cost keeps increasing while sales prices keep going down, with thinner and thinner profits. Therefore companies engaged in book and periodical printing want to switch to pharmaceutical package printing, and pharmaceutical package printing companies to liquor package printing, and liquor package printing companies to tobacco package printing. Tobacco package printing companies also have a hard time. It is true that the tobacco packaging printing industry generates a higher profit compared with other areas in the printing industry, but for such a company, it requires a large investment in equipment, strong technical reserves as well as social resource integration capability. Besides, this industry is highly affected by national policies. For example, in recent years, the State Tobacco Monopoly Administration adjusted its policies in the tobacco industry, strictly controlling the bid and tender process, and limiting high-end consumption which affected the tobacco industry.

'The golden age for the industry from 5-10 years ago is now gone forever. Now the tobacco packaging industry has very low profits. We Shenzhen Jinjia even have some orders in which we lost some money to different extents, but we are still doing them in order to retain the clients and business.'

Similar changes have been going on in the liquor packaging and printing market. Sichuan Lanjian Packaging is mainly engaged in liquor packaging and its general manager Mr Zhang Deming said that the liquor industry is high affected by economic trends. The fact that the GDP growth rate has dropped in recent years and national policies limit high-end consumption also brings a lot of influences for the whole industry, he said, adding that liquor companies used to have bids for a whole year, but now they only last for a quarter and sometimes only for one order. Whoever quotes the cheapest will get the job. In other words, liquor packaging is having its low profitability era. In the last year, Lanjian had sales of 800 million RMB, an increase of 10-12 percent against the year before, but with a sharp drop in profit.

Furthermore, many entrepreneurs mentioned that the price war led by intensified competition is getting very serious. Mr Pan Liquan, deputy general manager of Shandong Luxin Tianyi Printing said that, 'we face the same situation of decreasing profits in the pharmaceutical packaging printing industry', and encounter price wars quite often. 'It is quite often that after we quote, there are quick responses from other companies who

Entrepreneurs in the package printing industry from all over China gathered to talk about the market and discuss the challenges and opportunities that they face together

are willing to get the order by offering a price 20 percent less than our quote.'

Options

At the forum, the entrepreneurs not only put forward the above problems, but many addressed their options to tackle them.

Some companies choose to explore their own potential. For Chongqing Taiji Printing, it has stable business sources and good business development opportunities through its parent company – Chongqing Taiji Group, a renowned pharmaceutical company – and the growing pharmaceutical packaging market, however it also suffers from the pressure of declining profits because the end users have been trying to squeeze down prices. 'If we can't change the clients' cognitive model, we can only change ourselves. The defect in market can be neutralized by digging a way to reduce the internal cost,' said Mr Nie Zhiyang, general manager of Chongqing Taiji Printing. He also thinks that in order to increase profits, the packaging and printing company should focus on other activities within to facilitate change – equipment automation, information management and digitalizing processes. Chongqing Taiji Printing is now exploring how to better achieve the digitalization of its processes.

The same can be said for the pharmaceutical packaging company Shandong Luxin Tianyi Printing, which also benefits from a similar strategy. The production efficiency is improved while staff costs are reduced by investing more on new equipment and technology. Further, the sales department has been reformed along with the creation of a management policy and systemized performance assessment in the past few years. The number of sales staff has reduced to 17 in 2012, compared to 40 in 2008, while the volume of sales has doubled.

'In the past, we addressed cost, delivery time and quality in the traditional printing industry. Many management projects were regulated as per the industrial production criteria and therefore people innovated in processes and equipment. Jinjia was among the first to adopt some new technologies in the packaging printing industry, for example, heat transfer for gravure printing equipment and an inline inspection machine, as well as carrying out research and development. We developed many new materials and paper. All these helped quickly improve production efficiency, reduce costs and boost competitiveness,' said Shenzhen Jinjia's Mr Lv Wei.

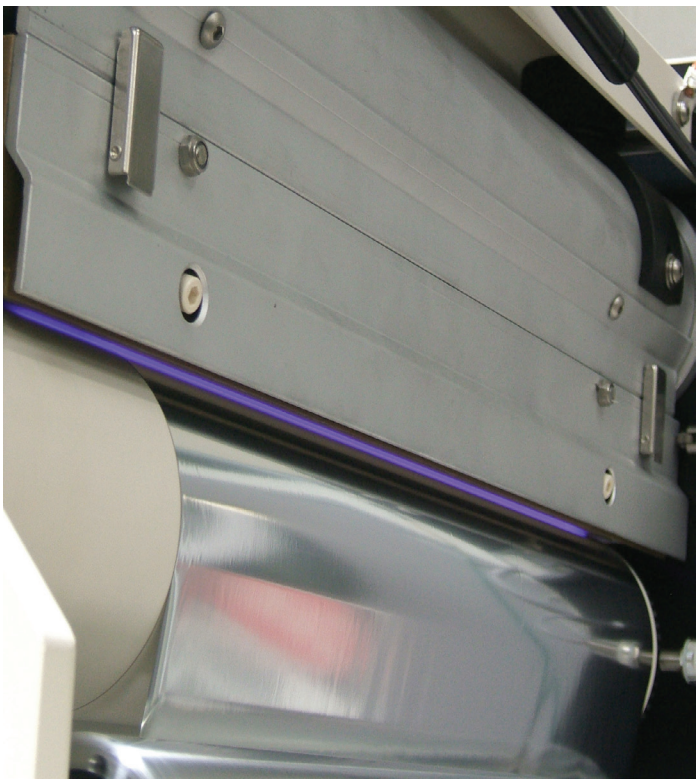
Shenzhen Jinjia plans to strongly boost its product and industry transformation to expand on its main business in tobacco package. It plans to develop diversified production with the tobacco package business as the basis along with business in electronic cigarette package, liquor package and pharmaceutical packaging. At the same time, Shenzhen Jinjia is involved in capital operations, like acquisition or holding other enterprises, to expand its business scope.

Shanghai Qiangwei Printing has positioned itself by serving specific customer groups with its own characteristics. Its chairman Mr Wang Huibei said: 'People are saying that the printing business is hard. I don't think so. The key is to make a precise positioning and make competitive products.'

In 2011, Shanghai Qiangwei bought a KBA Rapida 105 7-Cclor press to produce 3D packages. Then it developed multiple anti-counterfeiting packaging technologies including liquid embossed printing technology and positioned itself to produce luxury packaging.

Thanks to its knowledge in luxury packaging, Shanghai Qiangwei has now developed well, not only in the domestic market but also in foreign trade with more and more foreign orders, especially from South-east Asia.

While professional and unique services is a choice of C&C Joint Printing, Mr Zhu Min, its general manager, said that the development trend in package printing is higher than that of publication printing in terms of both quantity and growth speed. C&C leverages its own advantages in R&D ability for high-end green packaging market and anti-counterfeit package. Zhu further introduced two of their technologies – RFID and AR technology.



Avoid corona treating misconceptions

Mark Plantier, vice-president of marketing at Enercon, details three common misconceptions about corona treating that operators need to know.

Minimizing operating variables is the key to repeatable success in printing. Corona treaters are designed to eliminate the variable of surface energy and provide a film surface receptive to wetting with inks. Ensuring that operators understand how corona treaters prepare surfaces for printing is critical. However there are three common misconceptions about corona treating that operators need to know.

Misconception 1: Output power equals treatment level

The first of the three misconceptions is that power output is equal to applied treatment levels. Every corona treater can display its power output in Kilowatts (kW). This is the number of kW that the power supply will provide to a corona treater's high voltage transformer, which in turn supplies the energy to the system's electrodes. The electrodes and corresponding ground roll work together to ionize the air in the gap between them to create corona. Film passes under the electrode and receives corona treatment.

The reason output power does not equate to surface treatment level is primarily because of line speed. Applying the same power output to a film moving at varying line speeds results in different dwell times and therefore exposure to different amounts of treatment. The other variable to consider is the width of the electrodes being used. 2kW applied to an electrode 12 inches wide yields a greater applied treatment level than 2kw applied to an electrode on a 24-inch wide printing press.

The accurate method of determining the amount of surface treatment applied to the film is the watt density formula. It takes into consideration the following variables:

- Power Supply Setting
- Electrode width
- Line speed
- Number of sides being treated

Watt density is measured in either watts/sq ft/min or watt/sq m/min. The formula to calculate watt density is:

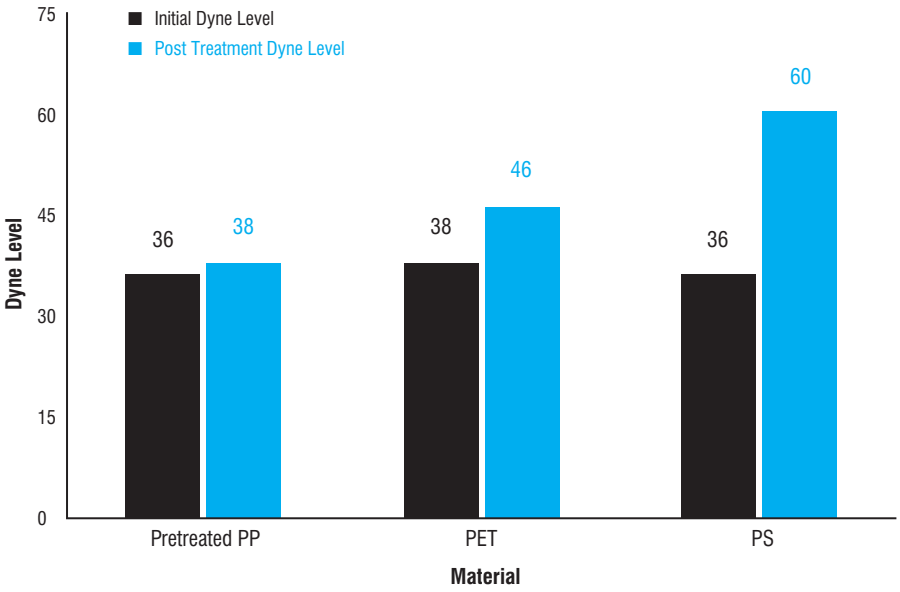
$$\frac{\text{Power supply output (wats)}}{\text{Electrode width(ft or meters) *line speed(ft/min or m/min) *number of treat sides}}$$

Table 1: below shows how changing variables changes the watt density values.

POWER SUPPLY OUTPUT	ELECTRODE WIDTH	LINE SPEED	WATT DENSITY
1kW	24in	350 ft/min	2.9
1kW	24in	400 ft/min	2.5
1.5kW	18in	350 ft/min	2.1
1.5kW	18in	400 ft/min	1.9

"The key to reliable corona treater operation is periodic visual inspection and a cleaning program"

Graph: Dyne Level Changewith Treatment Level of 1.1 WD



There are two ways to calculate and run lines with consistent watt density. The first is to educate operators on the watt density calculation and have them manually adjust the power supply output when running different line speeds.

If this is impractical or the line speed ramps up and down over a course of a run then converters may want to take advantage of automated watt density controllers included in some corona treater power supplies. These systems automatically adjust the output power as line speeds change to ensure the entire roll of film is treated with the same watt density.

Misconception 2: All films respond the same to corona treatment

There are many ways to determine the effectiveness of surface treatment. The best indicator of surface treatment success is running the full process and evaluating the adhesion results. A quick test to check for changes in the surface after treatment is a dyne test. Dynes are a unit of measurement that indicate the surface energy of a film. It is important to note that reaching a target dyne level does not guarantee adhesion.

Many corona treater users expect that applying the same amount of treatment to different films will produce the same dyne result. This is simply not true. The first variable is the film's initial dyne level. The second variable is the film's receptiveness to being affected by corona treatment.

In the Chart 1, you can see laboratory trial data comparing the surface treatment results of pre-treated PP, PET and PS. All films were treated with a watt density of 1.1. The results show that the PS was very receptive to corona treatment and its dyne level increased from 36 to 60 dynes. The PET was somewhat responsive and an increase to 46 dynes as reached. The PP film, however, was resistant to showing an increase in dyne level. If a target of 44 dynes was needed, a higher watt density would need to be applied. From the watt density formula from above it's possible to increase the power output, reduce the speed, or both, to increase the watt density.

Since the corona treater is incapable of knowing what type of film is running through it, it is imperative that operators understand that each film will respond differently to applied treatment levels and set the watt density accordingly. One final note – increases in watt density do not create proportional changes in dyne levels therefore it's important to test and develop recipes for the treatment levels that work best for each application.

Misconception 3: Maintenance is only needed when the treater is not working

Once the corona treater is properly installed and set-up to deliver the appropriate treatment level it's easy to forget about it. However there are some key periodic maintenance tasks that should be performed on a routine basis. Like Ben Franklin said: 'An ounce of prevention is worth a pound of cure.' This too holds true for corona treaters.

Routine inspection and maintenance will extend the life of a system's ceramic electrodes, prevent inconsistent treatment and high-voltage arcing. The key to reliable corona treater operation is periodic visual inspection and a cleaning program. Depending on the types of films being treated and environment of an operation, the frequency of preventive maintenance programs should be adjusted. For example, operations in dusty and dirty environments will require more preventive maintenance than a cleanroom environment.

Due to the nature of the corona treating process dirt and debris can accumulate on the system's ground roll and electrodes. Environmental factors such as heat and humidity can accelerate any potential build up as well. Keeping a corona treater clean is a very simple and easy process; operations must commit to doing it.

While the concepts presented in this article are somewhat straightforward, they are key to ensuring successful operation of a corona treater. Understanding and using the watt density formula, recognizing that all films do not respond to corona treating in the same way and employing a scheduled maintenance program will provide packaging converters with the tools needed for consistent results in printing.

From paper bags to print-on-demand

Graham Holding, commercial director at KM Packaging Services, guides the readers of *Packprint World* through the last 30 years of flexible packaging, as his company celebrates its 30th birthday.

Transport yourself back to a 1980s high street and you can immediately spot the difference. The food sector has changed almost beyond recognition in the last 30 years, moving from a supply driven to market-led supply chain where independent grocery retailers have all but disappeared. The food on consumers' tables has also evolved dramatically with processed foods and ready meals coming to the fore.

Although controlled atmosphere storage (CAS) was first used way back in the 1930s – when ships transporting fruits increased the levels of carbon dioxide in their holding rooms to increase the shelf-life of the fresh produce – it was the late 1970s before modified atmosphere packaging (MAP) started to reach retailers, and then only in central America. Since then, worldwide development has been continuous and use of MAP has become widespread to meet consumer demand, with the 1980s being the turning point for real innovation in this area.

The development of MAP was of course inextricably linked with the evolution of packaging films. As different foods respire at different rates, access to a wide range of lidding films with different properties was essential to further enhance product appearance as well as increasing shelf-life. We have certainly come a long way from the local greengrocer's half a dozen apples in a paper bag.

It is not just technical innovation that has provided a catalyst for change in the flexible packaging sector in the last three decades. The 1980s saw a proliferation of venture capital investment firms, spearheaded primarily by the USA but supported by the increasing availability of private equity in the UK and Europe. These new sources of finance underpinned a trend for mergers and acquisitions, leveraged buyouts and other consolidation – which often resulted in a change of ownership and/or management and thus new hands and perhaps new vision at the helm of industry leading firms. And, of course, all of this corporate reshuffling created certain gaps in the market that could be filled by new, independent players bringing their own unique insights to the marketplace.

KM Packaging was founded in 1984 by Mark Ormrod and Keith Jeffs, two highly experienced European packaging industry experts. From its initial focus on confectionery and snack packaging, the firm has since dedicated its resources to developing flexible packaging products for a much wider range of food manufacturers and processing companies. During that time, as well as targeting the UK market, the company has created an international profile with long-standing customers, distributors, suppliers and partners in countries and regions as far afield as the Americas, South Africa, Middle East, Australia and New Zealand.

In the early 1980s consumers saw a new fad emerge for 'generic' packaging – brandless and printed with only basic information such as the product name, ingredients, manufacturer and barcode. It was assumed that, by removing logos and other design and illustrations, the products could be manufactured more cheaply and the savings passed on to the consumer. In reality, these foodstuffs were often processed on the same lines as branded items and the cost of design was a relatively small percentage of the production costs. By the late 1980s these products had disappeared from retailer shelves forever.

Stand in a supermarket aisle now and you're faced with the other extreme – row upon row of colorful, design-led packaging vying for your attention. Intelligent packaging is now the norm, not just in terms of improved technical performance but also in terms of designs to reduce packaging waste – and of course to make the purchase quicker and easier. The sector is gradually catching up with the smartphone age with QR codes often included on-pack and, thanks to a new era of digital printing, short-lead promotions providing greater visual on-shelf appeal.

There are ever-increasing demands from packaging buyers for shorter order run lengths, reduced stock, fast turnaround times and point of sale packaging to attract and engage consumers. With the evolution of high definition digital printing on a wide variety of packaging materials – from films to corrugated and everything in between - it's now possible to take advantage of print on demand of high quality, colorful shelf-ready packaging (SRP) in smaller batch runs, with no minimum order requirement.

In the early 1990s the ready-meal and convenience food sector really started to take off. KM Packaging was ahead of the trends and had already started to develop a range of options to meet new requirements, revolutionizing the ready meal industry with lidding film for aluminium foil trays in the late 1990s and paving the way for a new generation of cost-effective, freezeable and ovenable meals which would subsequently grace dinner tables across the world.

The popularity of convenience food is still on the rise, driven in no small part by our time-poor society and the increasing number of single-person households, yet the industry is pulling together to counteract the potentially damaging effects of yet more packaging. Some tray manufacturers are now using up to 25 percent less material in their products with no detriment to quality, whilst KM Packaging has downgauged the weight of many of its films, reducing pack waste as a result. In addition, advances in anti-fog treatments and printing directly onto film mean that manufacturers can reduce the size of the sleeve, or dispense with it entirely.

Indeed, the last 30 years have seen a real revolution in flexible packaging with developments that few could have predicted back in the 1980s. It's hard not to wonder where will we be 30 years from now?

As different foods respire at different rates, access to a range of lidding films with different properties is essential to enhance product appearance as well as increasing shelf life

Multiple SKUs, each requiring unique packaging, is a trend across the retail sector

Material supply to suit demand

With shorter runs continuing to be a hot topic across the packaging market, so new business models are forming to optimize the delivery of materials. David Pittman speaks with Thomas Graphics and Eurocast about their work to support this market dynamic, while Andy Thomas discusses Avery Dennison's work in this area.

There can be no doubt about the changing nature of run lengths. Across the packaging supply chain, from printers and converters to brand owners and retailers, large stocks of pre-printed packaging are no longer the norm, while customized, and even personalized, marketing campaigns are to be seen across stores as brands look to capture the hearts and minds of consumers, as well as their spend on food, beverages, healthcare products and more.

Press manufacturers and other hardware OEMs have been developing systems to suit this changing market dynamic with faster press set-up times, changeover times and automation prevalent features of modern printing equipment.

Many converters though might be hamstrung in their efforts to capitalize on such activities and opportunities by their material supply chain, with larger volume orders and infrequent, timetabled deliveries not allowing them to be as responsive as they might like.

Thomas Graphics was established in Denmark in 2007 to provide synthetic polymer films, in any width and quantity, and to assist customers with technical matters. It has partnered with Poland-based film manufacturer Eurocast to advance this initiative, and to offer the narrow web printing market a new channel to receive printable, high-quality films with shorter lead times.

'In packaging, small runs are increasing and so we are receiving more and more enquiries,' says Nanette Thomas, the founder of Thomas Graphics. 'However, the most important thing is to offer a consultancy service to narrow web printers, to make sure they get the right material for the right packaging.

'The material offering has to fit the supply chain, so we work with the printers and their customers to understand their systems, technologies, process and requirements. Each step is important to delivering the optimum packaging, and it is more complicated than just supplying material.'

'More and more brands and retailers are turning to customized marketing,' adds Klaus Damberg, president and chief executive officer of Eurocast. 'This means large volume orders are going away.'

Thomas Graphics and Eurocast are also working to assist converters in material selection, cost and process optimization, and to improve their sustainability credentials, with Damberg

saying: ‘A lot of new trends are shaping the market today, such as moving to different packaging structures and environmental concerns.

‘This poses questions for narrow web converters who are facing up to issues they might not have had much to do with before, such as ink migration and curing, food contact approval and downstream convertibility.

‘We are working to help them with these issues, and to manage the whole process, including documentation, traceability and approvals, and practical operational issues like understanding why add how films behave differently to traditional labestocks.’

Damberg says that the wide web market is increasingly acquiring narrow web capabilities, either through buyouts of whole businesses or new technologies to extend their portfolio, to cater to this new dynamic, such as the creation of Coveris and Constantia Flexibles buying Spear Labels. The narrow web market has the opportunity to leverage its existing know-how to capitalize, Damberg says, giving it a ‘head start’.

‘The average number of SKUs in supermarkets has quadrupled in the last 10 years, so this is already a fairly well-established trend, but it is accelerating at a fast rate than the market predicted.

‘If narrow web converters focus on what they are good at and their specific strengths, which often includes responsiveness and flexibility, they are well-placed to take advantage.’

Nanette Thomas says: ‘Narrow web label printers are used to making smaller, more frequent deliveries of printed products, daily in some cases, and when brand owners here about this and that it won’t cost them a fortune, they are extremely interested in the possibilities.’

To further their role as a partner rather than just a supplier, Thomas Graphic and Eurocast are adding converting to their offering. Damberg has experience in converting having worked with Gerhard and, later, RotoMetrics, and says: ‘Convertibility and converting speed are important factors, so we are building them into our consultancy service.

> “Lightweight, printable, laminated structures offer the kind of packaging versatility and functionality that make them a natural fit for the narrow web market”

‘We won’t be building hardware, but will produce die-cutting tools and have formed alliances with converting equipment OEMs that allow us to recommend suitable converting system to our customers.

‘It is not enough to just make the materials available, you have got go be prepared to go in and advise on the whole process. This means we’ll never be vertically integrated as we want to be able to respond to changes in the market, whether that’s new material structures and compositions or new requirements from band owners, and we want to be able to do it fast.’

‘We want to be more than just a material supplier,’ concludes Nanette Thomas, ‘and to help converters and their customers touch consumers’ hearts with the right packaging.’

Avery Dennison is increasing the range of non-pressure sensitive materials it offers to narrow web label converters, with a new focus on those looking to convert short runs of flexible packaging products.

‘These lightweight, printable laminated structures offer the kind of packaging versatility and functionality that make them a natural for the narrow web market,’ says Cindy Collins, who is leading this push at Avery Dennison.

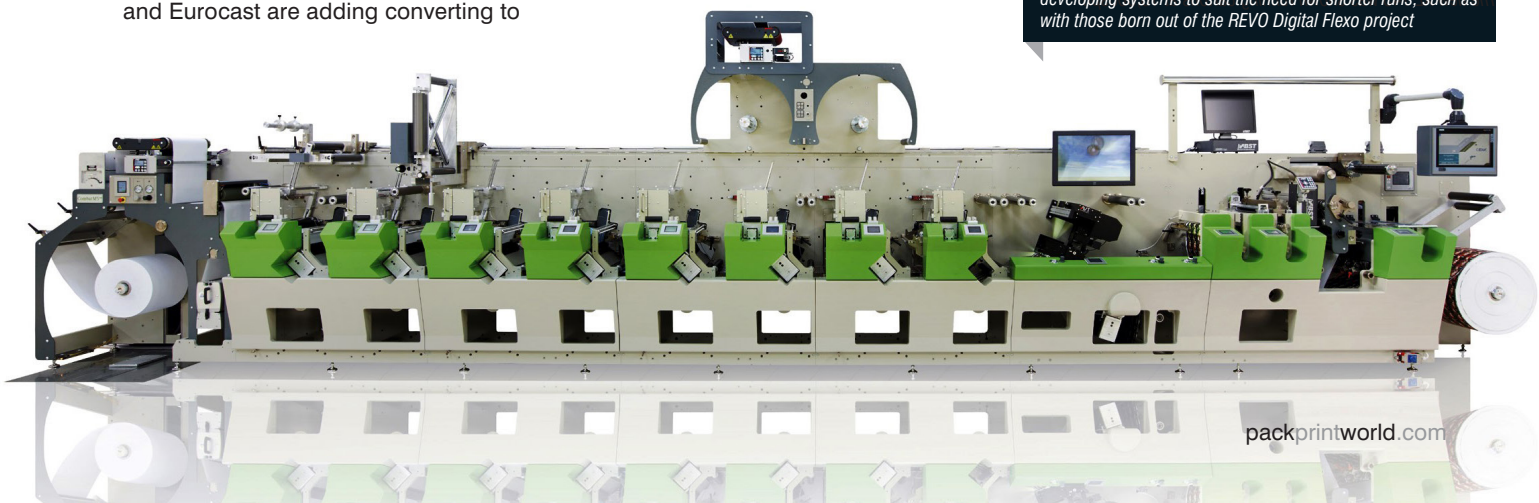
Around four years ago, Avery Dennison started talking to narrow web converters about the possibilities of diversifying their business by entering the flexible packaging market.

The company recently joined with a group of industry partners to highlight narrow web package print opportunities. These partners – including GEW, Karlville, DuPont, MPS and Zeller & Gmelin – took part in a roadshow across the US, which looked at all aspects of narrow web flexible packaging including web handling, converting, low migration UV printing and web temperature control. The subjects covered included shrink sleeves, as the technical requirements are similar.

Avery does not manufacture flexible packaging products itself, but sources them and slits to order for delivery to its customers. The range of products includes single ply films, laminated pouch materials available with both paper and film, and lidding film/papers.

‘I work with half a dozen laminators to provide a limited but well tried and tested range of products,’ says Cindy Collins. ‘I see a fast-paced trend of wide web laminators looking to partner with narrow web converters for one-offs they can’t do profitably themselves.’

Press manufacturers and other hardware OEMs have been developing systems to suit the need for shorter runs, such as with those born out of the REVO Digital Flexo project



Plastic coatings, step aside

Using traditional extrusion coating equipment, Smart Planet Technologies' mineralized resins are replacing plastic coatings, offering production efficiencies, enhanced performance, low costs and recyclability, writes Danielle Jerschefske

Polyolefins are inexpensive, readily available, easily used in manufacturing, and provide performance as a barrier layer in paper and label packaging applications. On the down side, paper packaging with plastic coatings cannot easily be recycled with standard recovery equipment.

Despite single stream collection programs for packaging materials in the US, recyclers typically decline to accept plastic coated cartons and cups, rather diverting such materials to landfill. The plastic layer creates processing problems at many recycling mills. The cities of Portland, Oregon and Minneapolis, Minnesota do not accept plastic coated boards in their municipality recycling program for this reason.

'A lot of poly coated stock is high value solid bleach board (SBS),' explains Johnny Gold, senior vice-president of the recycled fibers division at Newark Recovery and Recycling. 'It's great fiber, but as soon as poly is on it, it's contaminated. Recyclers shy away because it will clog up our systems without additional chemical and mechanical processing.'

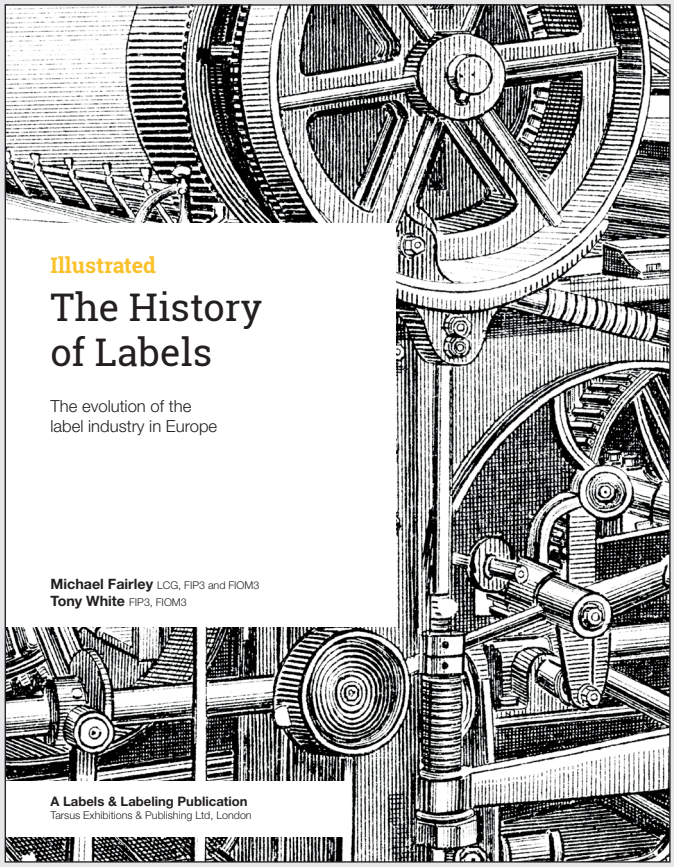
Smart Planet Technologies has developed a way to mineralize commonly used plastic coatings, such that barrier-sealed boards can pass standard industry recycling tests. Georgia Tech's Institute of Paper Science Technology (IPST) has completed third party testing. The result of the testing proves high yields, processing attributes, and re-pulpability.

EarthCoating delivers a trifecta of advantages to its users, demonstrating improved barrier and heat seal performance, potential cost savings and a reduced environmental footprint. Various packaging supply chain stakeholders have tested EarthCoating across a broad range of applications – hot and cold beverage cups, salad and hot bar food trays, frozen food boxes, chilled wine labels and ice cream packaging – with success.

'The coating that Smart Planet has created breaks up in the pulper and disappears,' Gold continues, 'and we don't have the problem of gumming up our equipment. It could be a real boon for our industry.'

Chris Tilton, chief technical officer at Smart Planet Technologies, says: 'It is important to understand the magnitude of the technology. EarthCoating is a real solution for the long-standing challenge

Understand the past to create the future



With detailed illustrations and explanations, The History of Labels is a comprehensive and invaluable reference source on label development, beginning over 300 years ago. Know the history of the industry and understand how label technology and demand progressed, to create better solutions, more accurately predict future growth areas and demonstrate your expertise to clients.

Digital is the fastest growing technology for label printing. It creates opportunities to enter new markets, take on high value projects and diversify from labels into package printing. 'Digital Label and Package Printing' unlocks the potential of digital technology and future-proofs your ability to identify future opportunities in label and package printing.

From internationally renowned label and package printing experts Michael Fairley and Tony White

The two bestselling books that everyone involved in label and package printing should read

THE OPPORTUNITY IS NOW!

Available exclusively on Amazon.com and its local sites in the United Kingdom, Germany, France, Italy and Spain. Simply visit the Amazon site nearest to you.

Shipping is free depending on location. Both books qualify for full Amazon Prime benefits and are also available on Kindle and other e-book readers.

Despite single stream collection programs for packaging materials in the US, recyclers typically decline to accept plastic coated cartons and cups, rather diverting such materials to landfill

of recycling barrier-board and other coated paper materials, including corrugated boxes.'

Why Plastic

Polyolefin coatings such as polyethylene, polypropylene and others, provide two key capabilities to the packaging manufacturer: the ability to be heat sealed and barrier protection. Heat sealing is a key performance measurement because forming cups and cartons at very high speeds is done by sealing along the side or bottom of the container. This is done at speeds up to 500 packages per minute, at temperatures up to approximately 1,000 degrees F. The coating layer provides a medium allowing the packaging surfaces to adhere to each other, forming a tight bond with good fiber tear.

Polyolefins are flexible across a wide band of heat ranges, adhere well to paper and are machinable under the most demanding heat-seal requirements. Without the coating, the fiber surfaces will not bond to each other and the package would fail. Additionally, the plastic coating provides a barrier to both water and moisture, maintaining product quality and packaging integrity.

Mineral possibilities

EarthCoating technology is based on the mineralizing of polyolefin extrusion coatings by weight between 30-60 percent. The mineral content is highly refined calcium carbonate, evenly dispersed throughout the resin. In the past, resins with higher mineral content often had poor dispersion with large clumps of minerals and would not properly extrusion coat on mainstream converting lines.

The calcium carbonate is wet ground into small particles and compounded into the resin during production at Standridge Color, the manufacturer of EarthCoating. The possibilities are there for polyolefin and other plastic coatings, including polyethylene, polyester, bio-polymers, bio-derived polymers and polypropylene.

Barrier performance

The evenly dispersed particles in the resin compound ensures high performance and ease of processing during extrusion. The dense nature of the minerals prevents percolation through the layers. Water and moisture molecules are repelled and re-directed by the mineral particles, protecting the product enclosed within the packaging. The resin also delivers high resistance to fatty acids and oils.

Tilton says: 'This not only makes EarthCoating suited for production using standard extrusion equipment, but the minerals themselves build a barrier, a three-dimesional matrix confined within the packaging barrier layer.'

Printability

Generally, the flakes from EarthCoating will be more opaque because they have the mineralized content inside them. Additionally, the surface characteristic of EarthCoating is quite different to a plastic or bio-polymer type coating. Because of the high mineral content, under magnification, the surface appears coarse and rough. However, to the consumer the coating appears exactly like a plastic coated surface.

The rough surface provides good ink adhesion and the coefficient of friction (COF) is ideal for ink wettability. Also, surface energy levels, such as the dyne level, is higher than say, polyethylene. These features create a surface that can deliver premium print quality.

Cost

Todd Gasparik, director of marketing, Smart Planet Technologies, says: 'The combination of lower material costs and the ability to down-gauge coat weights serve as a great way to engineer cost savings.'

Existing coating machinery extrudes EarthCoating without retrofitting the extrusion coating or die-cutting equipment. In addition, paperboards coated with EarthCoating may be converted using standard folding and scoring equipment, as well as, hot and cold glue and heat sealing equipment. Because of surface energy levels and physical surface characteristics, boards coated with EarthCoating can outperform plastic coatings in high speed cold and hot gluing processes.

Since certain grades of fibers with EarthCoating can be recycled comparable to an uncoated board grade, there is an additional opportunity to sell the trim and cuttings from the package converting process back to recyclers. EarthCoating resin is readily accessible at production facilities in the US, Asia and Europe.

Sustainability

The reduction in plastic content with the direct replacement of minerals has shown to be beneficial in extruded polyolefin lifecycle assessments, and have a positive environmental impact. These benefits are anticipated to apply to boards with EarthCoating.

More impressive is the ability to recycle paperboard with mineralized resin coatings. The small, dense particles process out of the fibers through common industry screens and in centrifugal cleaners where they're washed out as a contaminant.

'Now that the economic value is proven,'says Gasparik, 'the existing infrastructure can now be used. Imagine the potential impact of recycling the millions of tons of premium fibers that might otherwise end up in landfills.'

Mineral extrusion performance

EarthCoating is engineered to run at high volumes, on high capacity, large scale coating lines found at leading paper mills and third party paper extrusion facilities around the world.

Fibre Converters makes a variety of coated paper products including kraft liner sheets, laminated chip board and water-resistant paperboard, primarily out of recycled material (at least 80 percent of

all paperboard sold by the firm is recycled content). Two years ago Fibre Converters started applying EarthCoating to base stock for high volume environmental grocery and food service trays.

Dave Lushin, director of supply chain at Fibre Converters, says: 'The experience has never been a bad one. It runs extremely well, very comparably to traditional non-mineralized coatings. This means less poly in the waste stream. And we can run a thinner layer while achieving the same barrier properties, and find savings.'

Fibre Converters' clients have been more than satisfied with the performance of Earth Coatings. The supplier plans to transition more work that requires barrier properties to specify EarthCoating.

'The resin technology allows us to execute properties that are important to our customers in a recycled product that we can't get in a virgin product,' Lushin adds. 'Also, with the high load of minerals, the white opacity makes the material ideal for coloring. I was taken-back by a recent customer who said that the trial to qualify was flawless. They needed to be able to print, fold and glue the recycled board.'

Existing coating machinery extrudes EarthCoating without retrofitting the extrusion coating or die-cutting equipment

Paper supplier licensees

Leading paper mills have done their investigation of the product and understand the performance that can be delivered to SBS and sized liquid packaging, Gasparik noting: 'The mills have realized that mineralized resins offer a better solution than polyethylene and other coatings. Brand owners and retailers are interested, consumer demand is progressing, and they must have access to the technology when a customer wants it, and they must be confident that they can run and produce EarthCoating at efficient speeds in production without any capital investment.'

International Paper, Evergreen Packaging and Clearwater Paper all have the license to extrude EarthCoating. Clearwater Paper was the first.

A spin-off from Potlatch, Clearwater Paper was founded in late 2008. The business produces its own pulp and paperboard, but it is not fully integrated with related downstream converting. It is made up of two business segments with 2013 annual net sales of 1.9 billion USD. The pulp and paperboard division that offers EarthCoating makes up 39 percent of net sales.

At its mill in Arkansas, Clearwater Paper produces SBS for a variety of packaging applications including food packaging. There it regularly produces mineral coated folding carton stock for High Liner Foods, one of North America's largest seafood processers and sellers.

High Liner Foods is keen to find ways to reduce its business' environmental footprint and encouraged its supply chain to make EarthCoating accessible to order. Clearwater Paper began trials at the beginning of 2010 and started selling EarthCoating EC-40, with 40 percent mineralized resin, in the last quarter of 2010.

The coating is listed in the supplier's portfolio of grades and is actively promoted as an extrusion offering. Earth Coating is available with a coating weight down to 7.2# per 3,000 sq ft, a common film weight for many packaging applications, and is offered at higher weights as well. At the same coat weight as traditional poly coatings, EarthCoating yields a thinner film thickness due to the higher density because of the mineral load.

Rich Dreshfield, vice-president of sales and marketing at Clearwater Paper, says: 'We are excited about the technology. The Industry is looking for poly replacements and Earth Coating is a step in the right direction.'

Lynn Weathery, product manager at Clearwater Paper, says: 'We promote it entirely on the fact that it replaces a percentage of the polyethylene. We like what it can offer, but it is not a complete plastic replacement. We try to be delicate when talking about replacing a petroleum product with a mined product.'

Clearwater Paper spent a considerable amount of time commercializing the EarthCoated product line. 'We had a learning curve as with any new product,' explains Weathery. 'We have good runnability with the resin, albeit slightly lower than a normal low-density polyethylene. There are no pinholes in the lay down and it has good adhesion.'

Packaging converters are easing into the change. Weatherly finds that clients are more comfortable with ordering the same specifications for EarthCoating as they use for traditional poly coatings. However, once packaging converters realize they can get comparable performance, with less coating and find cost savings, they're more interested in making the change.

Sustainable recovery

Paper recycling runs in Johnny Gold's blood. His grandfather entered the business in 1916, recovering pre- and post-consumer grade paper materials to make new products. He is a former president of ISRI (Institute of Scrap Recycling Industries), a past president of The Paper Stock Institute, current chairman of the American Forest and Paper Association's Paper Recycling Group (AFPA), and leader the AFPA and ISRI joint task force on paper recycling.

Within the existing value chain infrastructure, barrier coated packaging loses its value at the recovery phase. 'Now, if you've got a technology with poly, but we're able to bust it up so it doesn't affect our production,' proclaims Gold. 'It's a great item.'

EarthCoating preserves the material's value, and holds great potential to change the economic status quo of SBS recycling. If recyclers are able to successfully capture and re-pulp SBS and other barrier coated paper stocks, they have a chance to sell better material for more.

Tilton says: 'EarthCoating makes the collection process an opportunity, and the re-pulping of high value fibers from a coated paperboard into a viable business like it never has been before.'

Paper materials with EarthCoating have successfully processed through internal re-pulping trials as if it had no coating at all. Smart Planet Technologies and Newark are in the midst of commercial trials at two mill locations. The objective is to confirm that select grades of paperboard can be commercially recycled as light and heavy print bleached board cuttings.

IPST report

Scientists at IPST used samples of EarthCoating extruded paperboards, including control samples, when testing re-pulpability of the technology. The materials were first weighed and documented. Next the samples were put through a process that mimics commercial re-pulping and disintegration. The disintegrated pulp was then screened using a screen with 0.01in sized openings.

Two groups of material emerge from the lab pulping equipment: the 'rejects', non-fiber material considered contaminated and filtered out, and the 'accepts', which are the good clean fibers that can move forward into the paper machine to make new products.

IPST's report results indicate that the bleach board with EarthCoating shows high accepts yield (80-plus percent by weight) and nearly 100 percent overall yield. The testing shows EarthCoating is a solution. And while some of the 'accepts' have plastic and mineral fragments, they are much smaller than 1mm in size and should easily process through normal industry systems. 'Also,' says Tilton, 'the mineral containing fragments are very dense (20-30 percent more than water), making them particularly easy to separate in post-screen processing systems such as centrifugal cleaners.'

Double Rainbow Ice Cream tests EarthCoating

When applied to paperboard substrates used to make ice cream packaging, EarthCoating provides the necessary moisture barrier and heat seal performance required to withstand freezing and thawing conditions. Double Rainbow is an ice cream producer based in San Francisco, California. The company is currently trialing EarthCoating as a barrier coating alternative for its paperboard single serve ice cream cups.

Taryn Segal, chief executive officer of Double Rainbow, says: 'We are excited to explore the opportunity to make improvements that will ultimately benefit our environment.'

While Double Rainbow is in the trial period with Earth Coating, Segal hopes to phase in EarthCoating for all of its paperboard containers once successful tests have been completed. In support of recyclable paperboard packaging, Double Rainbow recently donated ice cream to the Recyclability Collection Pilot held in Anaheim, California by Smart Planet.

Why not mineralized resins?

Only three percent of Clearwater Paper's total output uses EarthCoating. Despite the success found with High Liner's adoption of EarthCoating for its frozen seafood cartons, the supplier has experienced no increase in demand. It has conducted trials for customers and has extruded the resin on other substrates, but adoption is slow. As sustainability continues to play a larger role in end users' packaging decisions, Clearwater feels EarthCoating is an alternative it must offer.

'It's going to take time to sell this whole thing,' Gold admits. 'To me, if the costs are the same, if it reacts the same when you're manufacturing it and it responds better in recycling equipment, why not adopt it?'

Millions of fresh produce, frozen food, beverages and other products found in North American retail grocery outlets are packaged today using EarthCoating. As awareness improves, and consumers continue to reward businesses that make environmental considerations, adoption should progress.

However, there remains reservation at all levels. Stakeholders are concerned about consumer expectations, particularly at the retail level, for them to collect, sort and direct the packages away from the landfill. However, it is important for the retailers such as coffee companies, to understand that EarthCoating can potentially replace all polyethylene coated cups and folding cartons. In this scenario, collection can be implemented after retail use, relieving the stakeholder from retail level separation and collection costs.

There is anxiety about upsetting the balance between negotiated low costs within the packaging supply chain and the possible use of an unknown new material. Tried alternatives such as biopolymers contaminate plastic waste streams, and aqueous coatings and emulsions do not have the heat-seal-ability or the capability to extrude at high speeds. There is also a fear that environmental claims might be disproven.

'Some resistance to change takes place at the packaging converting and printing facilities,' note Gasparik. 'As margins have compressed in recent years and the converting market continues to be ever more competitive, converters fear any change to the delicate balance of maintaining good customer service and workable profitability. A minor change in materials specifications, they fear, can upset production and possibly reduce margins and extend lead times.'

Numerous commercialization projects are on the calendar for this fall. Hansol, a large Korean paper manufacturer and Metsa Board of Finland through Case Paper, will begin piloting EarthCoating in the US on several paper grades. These pilots can potentially support future plans of running mill direct EarthCoating grade origination in both Asia and in Europe. The Atlanta-based Global Paper Solutions (GPS), a division of Asia Pulp and Paper (APP), will begin pilot production this year.

EarthCoating manufacturer Standridge Color is making an investment too. It is opening a multiple machine, single and tandem coat, twin-screw extrusion coating facility dedicated to producing high volume cup and food packaging stock providing various EarthCoating resin choices to the market by mid-2015.

Fibre Converters has expanded its EarthCoating product offerings. It partnered with Custom Paper Tubes in Cleveland to produce 40 percent mineralized hyper barrier (HDPE/PE) tube liners for high moisture and oil barrier. In this application, EarthCoating replaces materials used for laminated tube linings like foil and BOPP.

As EarthCoating is offered more and more by large, integrated packaging companies at the mill level, the value chain infrastructure around the technology strengthens without threat to current cost structures. A handful of bold leaders have taken the step to find and adopt new technologies that both meet their packaging needs and their objectives to reduce environmental impact. Who else will lead the change?

Perfect packaging
Print pros choose KBA

When it comes to printing and finishing sophisticated packaging and displays, trade professionals through the years have put their trust in KBA. Whether heavy board, microflute, special papers or films – nothing can match the reliability and unique flexibility of our medium to superlarge Rapidas. Only KBA, the world market leader in sheetfed packaging technology, can provide such in-depth expertise in coating, inline production, quality management, paper logistics, workflow integration and new options for brand protection.

Koenig & Bauer AG, Sheetfed Offset Presses
Fon +49 (0)351 833-0, kba-radebeul@kba.com, www.kba.com

KBA People & Print

KBA.R.623.d

GRAFICA | TAURUSLAB.NET

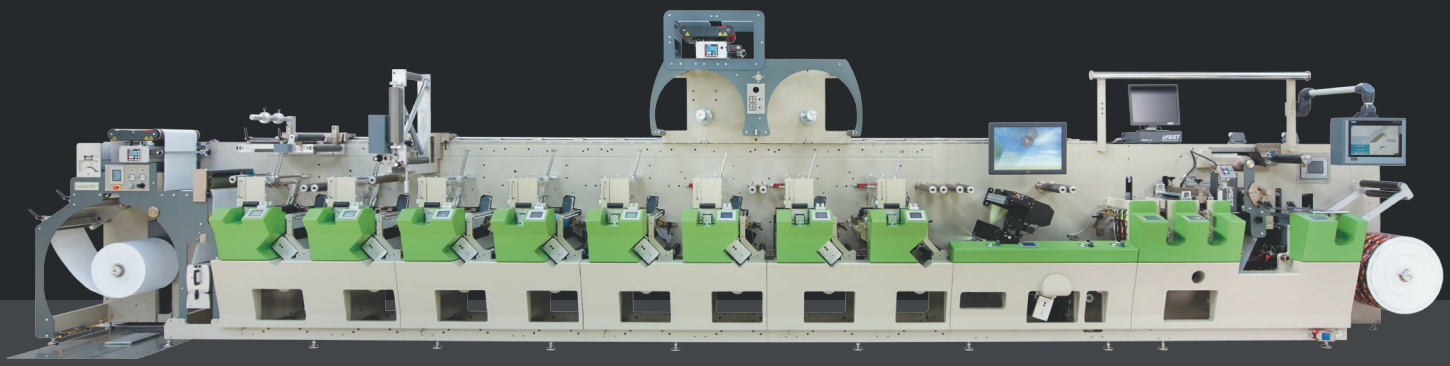
QUALITY wins!

what appears simple is often the most difficult to realize

Team Member

REVO

DIGITAL FLEXO REVOLUTION



M5

The new GIDUE "Digital" revolution in the Labels and Packaging industry,
"digital" micro-runs, long-runs, profit, quality, all-in-one press.

Qualitaly!

9 - 11 September · Chicago
LABELEXPO AMERICAS 2014
www.labelexpo-americas.com

29 Oct - 1 Nov · New Delhi
LABELEXPO INDIA 2014
www.labelexpo-india.com

3 - 5 December · Guangzhou
SOUTH CHINA LABEL SHOW 2014
www.southchinalabelshow.com

GIDUE

www.gidue.com