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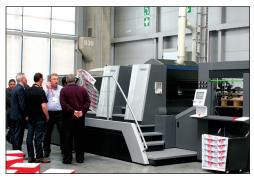
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DIGITAL MOVES FORWARD AT LABELEXPO AMERICAS

In this edition we report on exciting new developments in the digital label arena. Mark Andy, HP Indigo and Heidelberg are all making major technology announcements, and many of the new presses will be launched at Labelexpo Americas in Chicago this September.

In the case of Mark Andy's Digital Series platform, an old acquaintance of L&L, Ray Dickinson, has brought his in-depth experience to the project – Ray was selling Indigo presses back in 1997 – along with a highly experienced team.

HP Indigo, meanwhile, will use Labelexpo Americas as the platform to launch the WS6800, the next iteration of its outstandingly successful WS6600 digital press. Perhaps the key advance here is the inline spectrophotometer, which opens up exciting new possibilities for automated color control at the front end. HP is claiming the press increases converter productivity by up to 50 percent.

The Heidelberg announcement is intriguing, as it leverages the offset giant's new relationship with inkjet expert FujiFilm to bring a new digital label press to market.

Also of interest at Labelexpo Americas will be Xeikon's new focus on segmented markets, with inmold labeling an interesting new development made possible by the company's ICE toners. Expect to see more news in L&L4.

To put these digital announcements in context please make sure to read our comprehensive digital review in this edition, which covers toner and inkjet digital print trends, digital finishing (including laser die cutting), workflow and a fascinating review of regional digital trends.

And also check out the launch of Mike Fairley's extensively revised and updated guide to Digital Printing, now available from Amazon. This includes extensive reviews of every digital press and finishing unit currently available as well as a guide to substrates, workflow and business strategy. It will also form the course book for the forthcoming Label Academy, which is also launched at Labelexpo Americas.

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L&L

ISSUE 3

L&L EDITORIAL

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INBOX

FLEXO VS DIGITAL CROSSOVER – THE DEBATE CONTINUES

IN RESPONSE to the digital crossover debate on this page in LL2, Mike Ferrari, founder of Ferrari Innovation Solutions, LLC, (www.mike-ferrari.com), and a package industry consultant, sent this response. Ferrari utilizes his 32 years of service at The Procter & Gamble Co.to educate, guide and inspire brand owners and managers and the industries that serve them.

There is much alignment to the premise that digital package printing is a disruptive technology. This is especially true in 2014 with wide format presses already in the field. When analyzing a disruptive technology it is important to avoid using 'legacy metrics'.

In this case legacy metrics from analog printing would be; speed, cost, metallic inks, etc. Digital print presses would be below par vs these criteria. Disruptive technologies can be used to create interest and excitement and therefore high profit margins, delivering value that was not possible before. Said differently, leveraging digital print presses for what they are and can deliver is a far better reason to get into the business.

Often printers are running the numbers to create ROI's to justify purchase of a press. The thought of taking low volume jobs from analog and moving them to digital presses is the leading justification. The myth, 'digital printing is for short run jobs' has taken root and led to the wrong purchase decision for printers. The 'Share A Coke' project moving around the world and printing over a billion labels should have busted this myth. It is far better to redefine the business strategy associated with digital printing and evaluate the purchase of digital print presses vs. new business at higher margins.

Once a new business strategy is in place that leverages the new capability of digital print presses it is then prudent to transfer low volume jobs from analog. Leading with a business justification and model of transferring existing work from one technology to another does not change the consumer experience that will keep package printing in a commodity status in the eyes of the brand.'

PICK OF L&ĽS SOCIAL MEDIA

An interesting question and answer session involved the correct methodology for performing a tape adhesion test. The response came from Riddell Bruce, VP Engineering at Spectrum Label Corporation

'This is not a simple question, however their are simple answers. One solution is to reference ASTM D3359, which is a standard tape test. We have our own SOP which involves testing by placing the tape over the ink surface and pressing it down, waiting 10 seconds and pulling at a 45 degree angle.

The difficulty is that it depends on the substrate and the variable adhering to the substrate. Checking ink to paper is different than ink to film. Paper is porous and should stick well so tape testing will check the cohesiveness of the ink to itself. If the ink splits, there is a cohesive issue. If it is ink to film it depends on the dyne level of the substrate and its resulting affinity for the ink. A somewhat more important issue is what the steps are to remedy poor adhesion. I recommend a list of what to do if poor adhesion is discovered – that is to say: check with the ink or lacquer vendor for assistance, corona treat, prime, change speed, increase heat if possible etc.



TARSUS PARTICIPATES

Twenty-three members of the exhibition industry in the UK – including Douglas Emslie, CEO at Tarsus, organizer of the Labelexpo Global Series – will take part in a three-day charity bike ride June 20-22. The route covers more than 200 miles from London to Paris, undertaken by the team to raise funds for Events for Namuwongo.

The charity is a partnership of companies and individuals from the events industry, formed to support Namuwongo, a slum community on the edge of Kampala in Uganda. This year Events for Namuwongo plans to raise 400,000 GBP to provide: clean water, life-saving sanitation, essential health care, education for 500 children a year, and free sanitary products. The money raised in the past and for this year's challenge is needed for continued improvements of living conditions in Namuwongo.

In preparation members of the team have hired personal trainers, cycled to work and spent many hours on their bike to build stamina. There have been scrapes and falls but the whole team is in great spirits and training hard for the big weekend.

April Whitehead, secretariat for Events for Namuwongo, said: 'Events for Namuwongo is extremely grateful to Tarsus staff or all funds raised to date. This new cycling challenge is the most ambitious yet and so is the fundraising target of 20k GBP! The enthusiasm and commitment from the Tarsus Team and others from the Events Industry taking part in the London to Paris bike ride are incredibly inspiring, and we are right behind them every peddle push of the way!'

Tarsus and its team aims to raise 20,000 GBP for 'Events for Namuwongo'. **Please show your support and give generously at:** *http://uk.virginmoneygiving. com/team/londontoparis14*



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NEWS

THE INSIDER

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES

GOLDMAN SACHS TAKES OWNERSHIP OF FLINT GROUP

The merchant banking division of Goldman Sachs is to acquire Flint Group from CVC Capital Partners in partnership with Koch Equity Development LLC.

Goldman Sachs' merchant banking division and Koch Equity Development LLC, a subsidiary of Koch Industries, Inc., are to acquire 100 percent of the shares in Flint Group from funds advised by private equity firm CVC Capital Partners.

The Goldman Sachs merchant banking division and Koch Equity Development are to form a new entity to acquire Flint Group, and will support the strategy developed by Flint Group's management team as it pursues a targeted business mix evolution towards the more attractive and higher growth printed packaging market while maintaining Flint Group's strong position in the resilient print media business.

Antoine Fady, Flint Group chief executive officer, said: 'The management team of Flint Group is excited about this planned new ownership, and the opportunities this now presents.

'The investment by Goldman Sachs Merchant Banking and Koch is a clear vote of confidence in our vision, strategic plans and 'can do' culture. Flint Group's fundamental dedication to safety, sustainability, integrity and compliance will continue to form the foundation of all of our business activities.'

Martin Hintze, co-head of corporate equity investing in Europe of Goldman Sachs' merchant banking division, said: 'The acquisition of Flint Group fits well into our strategy of investing in leading global franchises and growing them organically and through acquisitions. We look forward to working in partnership with Koch Equity Development and Flint Group's strong management team to execute on their strategy.'

'Flint Group is an exciting opportunity for Koch Equity Development,' added Brett Watson, managing director of Koch Equity Development. 'Flint Group is a global leader with a clear strategy and a management team that has a consistent record of delivering results.'

Watson's colleague Matt Flamini, president of Koch Equity Development, said: 'Partnering with top-tier firms like Goldman Sachs and investing in competitively advantaged businesses with high quality management teams is consistent with Koch's investment strategy. ' TE HP INDIGO WS6800 DIGITAL PRESS to be launched at Labelexpo Americas

EXCLUSIVE HP TO LAUNCH LABEL PRESS AT LABELEXPO AMERICAS

HP Indigo's latest generation narrow-web label press will make its North America debut at Labelexpo Americas 2014, held at the Rosemont Exhibition Center in Chicago this September.

The third generation of the WS6000series, the HP Indigo WS6800 Digital Press is said by HP to offer 'breakthrough productivity, versatility and advanced color management.'

The HP Indigo WS6800 includes a new inline spectrophotometer, making setup time for color profile and matching three times faster than current methods. Users can match a target color on a specified media with complete consistently between runs, says HP.

The press also offers higher output with a larger, 12.59 x 38.58in (32cm x 98cm) image format for improved step and repeat utilization. A new automated mechanism delivers continuous, closed-loop repeat control to preserve precise accuracy of repeat length and image length during long runs.

Like the WS6600 press, the WS6800 has seven ink stations, allowing up to 97

percent of the Pantone color gamut to be matched using on-press simulations or an off-press ink mixing system. The new press is compatible with HP Indigo's new Silver Electrolnk for use as a spot or base color, which gives a metallic look for labels similar to UV flexo silver inks. Also available is HP Indigo White for Sleeves, a high slip ink that improves efficiency in the converting of shrink sleeves, by reducing the friction coefficient (CoF).

The HP Indigo WS6800 supported by the HP SmartStream Labels and Packaging Workflow Suite 4.1, powered by Esko. This workflow suite supports consistent repeat job control and provides advanced decision-making tools to help select suitable jobs for Enhanced Print Mode (EPM). A new, high definition 223 lines per inch (lpi) screen provides increased color space.

The press is qualified for a wide range of applications including PS labels, flexible packaging, sleeves, and folding cartons. It supports pre-treated materials as well as off-the shelf substrates with in-line priming.

INNOVIA GROUP CHANGES OWNERSHIP

Innovia Group has been acquired by Arle Capital from the Candover 2001 Fund, for an enterprise value of 498 million GBP, with funds raised from a syndicate of new investors. This means ownership remains with funds managed by the same international private equity company.

David Beeby, Innovia Group CEO said: 'We are delighted that we will be partnering again with Arle who have worked closely alongside us since 2009. They share our vision for the future and will continue to support new investment in both the films and security businesses moving forward.'

The Innovia Group employs 1,600 people across two divisions – Innovia Films and Innovia Security. It operates six manufacturing sites located in Australia, Belgium, Mexico, the United Kingdom, and the United States, coupled with a network of sales offices, agents and distributors throughout the world.



INSULATION MARKS NEW USE FOR RELEASE LINER WASTE

MUNKSJÖ and RecuLiner have collaborated on a new recycling method allowing liners to be transformed into high performance insulation materials. Andy Thomas reports



After fulfilling their crucial role in the labeling process, used liners can still have a role to play as valuable feedstock for new products.

Now Munksjö, one of the leading producers of PSA release papers, and RecuLiner, a privately owned Belgian company founded in 2010, have set out jointly to develop and promote the recycling of silicone coated label release papers into cellulose fiber insulation (CFI).

RecuLiner has developed a patented technology which allows used silicone coated release paper to be transformed into CFI, a natural material which is used for thermal and sound insulation of buildings. Release liner is treated with flame retardants and then transformed into light flakes using purpose-designed equipment.

In recent years, CFI has grown in popularity as a building insulation material, and has typically been produced from old newspapers. One of the main features of CFI obtained from release liner is the superior degree of elasticity of the fibres, resulting in better resistance to settling of the insulation material once it has been blown into the wall cavities.

Another major improvement compared to traditional CFI is given by the enhanced flow properties of the RecuLiner material, resulting in a much more robust behaviour during the application by the installer.

Also, thanks to the dominant yellow color of paper release liner, this CFI has the 'genuine look' of traditional insulation material, instead of the greyish shade of old newspapers.

Eric Van Pottelbergh, managing director of RecuLiner, commented: 'Release paper waste is a perfect raw material for the production of cellulose fiber insulation, and this recycling solution is extremely advantageous from an environmental point of view, thanks to the huge energy saving potential provided by the end product.'

Following the new agreement, Munksjö will offer this new recycling option as part of its Full Circle liner recycling program, which is also accessible through www. full-circle.eu.

RecuLiner has licensed the technology to its first CFI producer in the south of Belgium, expanding Full Circle's coverage from Germany to Benelux and France.

Marco Martinez, product manager Release Liners and Sustainability at Munksjö said: 'The collaboration with RecuLiner provides a valuable opportunity to increase the number of available recycling options for paper release liners in Europe. Munksjö sponsoring will offset cost for logistics, so that end-users who join through the Munksjö Full Circle program can be offered freeof-charge collection in a large part of this geography.'

The two companies aim to expand the scheme's geographical coverage by licensing new CFI producers, increasing the number of recycling outlets available throughout Europe.

The investment to set-up a new CFI production line, or to modify a traditional CFI production unit to process paper release liner, is said by RecuLiner to be 'fairly limited', lower than that of an average printing press. This makes the technology easily replicable geographically.

'It is even possible to conceive of a PSA label converter making a direct investment in this technology, allowing recycling of its own internal liner waste and that collected by its customers,' said Eric Van Pottelbergh.

The RecuLiner concept was one of the solutions commended by the European Recovered Paper Council (ERPC) at the European Paper Recycling Awards 2013, held in October at the European Parliament in Brussels. RecuLiner was commended for its innovation in the Technology Improvement and R&D category.

'This represents an important step towards a more sustainable labeling process, as it gives paper liner waste an opportunity of new life into a product with high environmental value,' said Martinez.

Concluded Van Pottelbergh: 'We are very pleased with Munksjö's support in the PSA industry and we trust this collaboration to be a cornerstone for a rapid roll out of our technology on a larger scale.'

RAVENWOOD PACKAGING: LINERLESS BECOMING MORE MAINSTREAM

UK labeling and sleeving specialist Ravenwood Packaging has hosted a conference for 40 experts from around the world, where the consensus was given that linerless labeling is gradually becoming more mainstream.

The conference was held at The Abbeygate Picturehouse in Bury St Edmunds and attracted attendees from across Europe and the US to Australia, who are promoting the use of linerless adhesive-backed labeling systems.

Ravenwood Packaging said the findings from the conference showed that minimalistic labeling is gradually becoming more mainstream, and new options within the technology are being welcomed by all sectors, particularly food packaging.

Ravenwood Packaging has been developing linerless labeling technology for a decade and recently celebrated the sale of its 1,000 linerless applicator.

Two new concepts from the linerless professionals were showcased by the company during Foodex 2014 in the UK, and will be featured again internationally during the autumn at Labelexpo Americas 2014 and Pack Expo.

It has just introduced 'slideable' labels which are made from thicker materials up

to 300gsm. These are linerless labels that can be applied automatically by Nobac 500 applicators. Unlike conventional linerless labels they slide on the pack allowing the customers to view the product inside. The 'slideable' labels, which can be produced 500 x 200mm, are supplied on a roll.

Also new for 2014 is 'skin pack' labeling which can now also be produced by Nobac linerless labeling machines. The main benefit of 'skin pack' technology is that various products can be packed in fewer trays as the product can be applied to fit to a standard tray which can simply incorporate large and smaller items.

Ravenwood Packaging managing director Paul Beamish said: 'Backingless labels are now big news worldwide. More and more attention is turning to linerless labeling as producers and packers realize the benefits of cutting the waste product out of the packaging production process.

'What started 10 years ago as a novel packaging idea has become widely adopted on the grounds of cost savings and as a result of the fast-growing green agenda. The fact that over 40 world delegates are here with us talking these



issues through in the UK is a sign of how pivotal we are in this field. We are leading this changing technology.'

Ravenwood Packaging stated that 'backing-free' labeling started as a niche idea, although the concept is now being adopted for widespread use around the globe due to its positive environmental credentials, such as the elimination of waste that is left behind with standard pressure-sensitive labels.

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FABIAN Silva, Keren Becerra and Jesus Ramirez of Ametiq

AMETIQ NAMES KEREN BECERRA AS NEW PRESIDENT

OPERATIONS director of Mexican converter Lobo Impresores begins two-year term in June.

The board members of Ametiq have chosen Keren Becerra, operations director of Lobo Impresores, as the next president of the Mexican label association, *writes James Quirk*.

The decision was made at an association meeting on March 12 in Mexico City. Becerra will be Ametiq's third president since its foundation, following two-year terms from Jesus Ramirez and Fabian Silva.

'We are convinced that Keren is the ideal person to take on the role of president of Ametiq,' said current president Fabian Silva. 'She has great experience as public relations director of the association and has previously taken on roles such as treasurer and director of the marketing committee. She was also a co-founder of Ametiq and member of its advisory board.' Silva added

VIVA420

Aniflo

Keyless offset

VIVA340

that it had been 'an honor to collaborate in the development of the industry in Mexico' during his term as president.

Keren Becerra said: 'It's a great pleasure to be the next president of the association. Ametiq is a project which we have seen grow, and to have the opportunity to work to generate change and contribute to the strengthening of our industry is something which fills me with enthusiasm. We are working on important projects and I'm sure that by working together as a team we can soon bring them to fruition.'

Ametiq was created in April 2010 by six Mexican label converters: Coflemex, Eticom, Etiflash de México, La Etiqueta Fina, Lobo Impresores and Etiquetas Anro. The association now has more than 40 converter and supplier members.

CONSTANTIA FLEXIBLES REPORTS RECORD YEAR

Constantia Flexibles achieved record earnings in the past fiscal year, with sales increasing by 29 percent compared to the previous year, and labels up 45 percent.

Sales including acquisitions on an annualized basis reached 1.7 billion EUR (2.4 billion USD) in 2013. Of this, 25 percent came from the companies acquired, while organic growth accounted for four percent. The annualized operative earnings before interest, taxes, depreciation and amortization (EBITDA) were 240 million EUR (332 million USD), up from 188 million EUR (260 million USD), which corresponds to a 28 percent increase.

The Labels business unit was Constantia Flexibles' standout performer in 2013, increasing sales by 45 percent to 410 million EUR (567 million USD). Growth was fuelled largely by acquisitions, such as of Spear and Grafo Regia.

The supplier said activity in its labels business was characterized by a strategic realignment and efficiency increases, although it noted that sales in 2013 were slowed by the cooler weather in important markets, which impacted sales in the soft drink and brewing industries.

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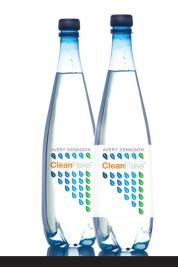
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NEWS

THE INSIDER

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES



CLEANFLAKE WINS MORE ENVIRONMENTAL AWARDS

Avery Dennison Label and Packaging Materials has had its CleanFlake portfolio named Top Product of the Year in the Environmental Leader Product & Project Awards, as well as taking home the Flexographic Technical Association's (FTA's) Environmental Excellence Award for Innovations in Sustainability.

CleanFlake is a patent-pending adhesive technology that 'switches off' when submerged in a recycling bath so the label cleanly separates from the PET flakes. Although these labels adhere firmly to PET bottles or containers during use, they detach readily in a conventional recycling facility and float to the surface of the bath, allowing clean PET flakes to sink to the bottom for easier reclamation.

An Avery Dennison Greenprint lifecycle analysis showed that if 50 billion sq in of typical pressure-sensitive labels were changed to CleanFlake, there would be a 75 percent reduction in solid waste. This amounts to more than 53,000 tons of waste – the equivalent of the waste generated by more than 20,000 US households.

The Environmental Leader Product & Project Awards is a program recognizing excellence in products and services that provide companies with energy and environmental benefits, or in projects implemented by companies that improved environmental or energy management and increased the bottom line.

These awards are the seventh and eighth won by the product range.



PHIL Baldwin, Mark Andy's aftermarket manager for Europe, with the Esko Full HD certificate

MARK ANDY GAINS FULL HD FLEXO CERTIFICATION

Mark Andy has become the first flexo printing machine manufacturer to adopt and receive Esko Full HD Flexo certification.

Certification is awarded after Esko specialists check the quality of several print samples against published Full HD Flexo parameters.

Esko has reported strong uptake of both HD Flexo and Full HD Flexo amongst printers and converters.

Mark Andy said the achievement of becoming the first flexo printing machine manufacturer to adopt and receive Esko Full HD Flexo certification, in addition to that of the Mark Andy Performance Series presses becoming the first HD certified flexo press line in 2011, make its level of print quality and production consistency unique across its range of in-line flexo equipment. executive officer of Mark Andy, said: 'Mark Andy is very proud to be the first fully certified Full HD Flexo manufacturer.

'We have worked very hard to ensure our customers can rely on us to remain current when it comes to all aspects of the flexo printing workflow. It is important for us to be up to date in the latest pre-press and platemaking technologies.'

Mark Andy Print Products, the supplies and consumables division of the manufacturer, is an authorized supplier and distributor Esko technology.

'We are proud to be working with Esko to provide access to the key technologies that support Full HD Flexo standards,' said Joe Calmese, director of flexo consumables for Mark Andy Print Products. 'It leads the industry in driving quality standards and consistency, and that allows us to better support printers and converters.'

Kevin Wilken, president and chief

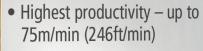
HEINZ JUNG RETIRES FROM GOEBEL

Heinz Jung has retired after a career spanning nearly five decades at slitter rewinder specialist Goebel. Jung took retirement at the end of April after more than 46 years at the company. He began his career in 1967 with a commercial apprenticeship at Maschinenfabrik Goebel, as the company was known then. After having completed this traineeship, he remained true to the company and undertook various roles at Goebel throughout his working life, including a leading position in sales. When Goebel Schneid- und Wickelsysteme GmbH was founded in 2001, Jung became the managing director alongside Dr Ralf Enderle, taking on the responsibility of the marketing and sales divisions.



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Selling your business

FIVE IMPERATIVES For unlocking your greatest value. By Bob Cronin, The Open Approach

In today's marketplace, we hear about premier companies getting sold at unbelievably high prices and those that could be sold only to someone who is also willing to buy a bridge. However, as it is with most polar-opposite situations, the truth lies somewhere in between. Any company with realistic expectations and a good management team can get justifiable offers for its business.

Great companies certainly are apt to be getting great deals, but probably not as tremendous as what you've heard. If you focus only on the "sell price," you misunderstand the true offer value. There are many other issues besides sell price to consider. Financing terms, asset transfers, debt assumption, earnout arrangements, provisions for remaining key employees, and more all factor into the value and attractiveness (or unattractiveness) of any contract. These issues can be significant.

A good example of this would be if you have ever bought or sold a home. Say the sell price was 400K US dollars, but you threw in furniture and decor, closing costs, and a home warranty; fixed numerous items identified at inspection; and paid the HOA transfer and six percent realtor fees. Your real net could be closer to 325K US dollars – nearly 20percent lower than the top-line figure.

For "less than great" companies, such factors are bound to affect things even more. Debt assumption may be structured differently. Earnout terms are likely to be longer. Specialized equipment may be valued lower. And remaining staff may need to get on board with different management teams quicker. Still, sometimes a rescue play can be just what's needed to turn the business around.

This aside, no matter what your situation, you can indeed sell your company – and feel satisfied with getting a good deal for what you have created. Great company or struggling, strong markets or poor, good times or bad, there are essentials to ensuring you receive a good deal for your hard-earned business.

As a long-time advisor to both big and small (public and private) label enterprises, I've seen these essentials sometimes dramatically change the possibilities for a selling company and the final deal value.

With that in mind, here are the top five imperatives for unlocking your greatest value.

1. Unique Value Differentiator – This could be a product or service, geographic or vertical market, specialized distribution channel, or something else completely novel to the industry (that would be in demand by the future marketplace). Any of

"In my experience, vision to the future in a strongly perceived niche market is far better than a past history of success"

these allows an entity to be viewed as something beyond its current results.

Companies are sold based on past three-year performance and belief in future potential. Ongoing opportunity can mean significant upside and increased transaction value. In my experience, vision to the future in a strongly perceived niche market is far better than a past history of success. If people believe they have much to gain in years to come, they are willing to pay a higher price.

2. Strong Management Team – Everybody wants to acquire an entity with a proven team that can build the business. A strategic may want to buy a company but will not make a great offer if it feels the team may need to be replaced. Additionally, for new entrants or those wanting to grow in a space, a proven team is a major part of the value opportunity.

Before you list your company, look at your current leadership and honestly assess any weak links or gaps in management. Take action to address these shortcomings. You may need to make some tough decisions, but it will be well worth it. Likewise, you may find untapped talents and opportunities during your assessment – which will give you more to leverage to create value. Few companies find the time to do this amidst day-to-day operations, and fail to realize that members of their top team may actually be weighing them down.

Like everything in business, people make a difference. In the best cases, the group who created the value can do it again with new owners, additional funding, and a willingness to pursue new ventures. In bad cases, your management team can be the stumbling block to a final sale.

3. Attractive Customer Base – Whom you sell to and the type of customer they are can be viewed positively or negatively. If your customer base orders on a consistent basis and helps ensure consistent cash flow, this allows for a more attractive offer.

If, on the other hand, you are chasing sales in tough markets, JULY 2014 | L&L



your value may be assessed lower. For best valuation, you need to have a strong position in today's perceived growth markets – financial services, healthcare, food and beverage (especially private labels), entertainment/gaming, and hospitality – versus retail, publishing, or manufacturing. Your focus on a growth segment opens the door to a broader future and higher value.

Buyers also like to see loyalty, prompt payment, and multiple contact points within top accounts. Contracts can be broken easily, and most have variances and flexibility that reduce their impact. A long track record with a good company is far more important than a three-year contract.

4. Barriers to Entry – How easy is it for another firm to compete for your business, without any proprietary offering or market position? What are the key aspects of your products or services that secure your competitive edge? How much does price play into your customers' choice?

If there are multiple reasons why people buy from you – and will continue to for the long-term – then your base of customers appears more secure. This will give a potential buyer a reason to value it beyond the traditional market multiple.

On the other hand, if there is risk to the business, then the price offered for it will reflect such risk. Risks could be internal issues such as decreasing demand for a product or having a commodity label as a primary offering. They could also be external issues, such as negative dynamics in one of your vertical markets or the financial performance of a key client.

Examine your company from the perspective of a buyer and really kick the tires. No company is immune to risk. Identify product, client, or even employee areas where there is the most risk, and make decisions to help mitigate them. While some risk may be out of your control, other issues can be surprisingly fixable.

5. Cash Flow – Cash flow is always a key part of any deal. It's what keeps your business growing during the deal consideration process, and will help lay the groundwork for your future.

To see a company based on what it is today and the belief that if will be okay tomorrow does not bring about an excited group of buyers. However, to see a company that has strong, consistent cash flow and a solid, future-directed growth plan is another story. Cash is king, and buyers base their offers on it heavily. Good cash flow typically confirms you have that strong set of clients, solid products and services lineup, and the ability to sell through a buyer's offerings.

Buyers who see you with strong cash flow can envision your company as being a growth engine for its own business or as a cornerstone upon which it can build a larger enterprise. The acquisition consideration process is not just about what you are currently, but what you might become. People will always pay more for a door to the future than a slice of the past. Your "How easy is it for another firm to compete for your business, without any proprietary offering or market position? What are the key aspects of your products or services that secure your competitive edge?"

potential is key.

When you decide to sell your company, there will be no shortage of websites, M&A generalists, and independent professionals that are willing to help. If you've taken steps to utilize the above suggestions, you will be light years ahead of most other sellers. Understand which factors enhance your value and how to showcase them. Know what issues are dragging you down, and have plans to address them. And finally, be very careful in reading and interpreting letters of intent and deal terms.

This is what advisors are for, and why industry specialists – who understand your customers and revenue opportunities, as well as the modus operandi of your suitors – are worth their weight in gold. It is no coincidence that the top label companies either have label industry M&A advisors or departments dedicated exclusively to making deals. They do not depend on industry generalists. And they do not look simply at offer price. They understand all the facets of an arrangement, challenge it to enhance the offer, and wisely assess how to proceed. After all the work you have put in to build your business, you owe it to yourself to protect it with the help of experts.

After 40 years in the business, I have seen it all (or maybe just most of it). Call or email me anytime. I am always happy to help you plan out what could be the next most lucrative deal in our industry.



ABOUT THE AUTHOR

Bob Cronin is managing partner of The Open Approach, an investment banking/M&A firm focused exclusively on the world of print. The firm's proven results have made it the exclusive member-recommended firm of PIA/GATF and IPW.

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Mark Andy launches Digital Series

MARK ANDY'S new hybrid digital press platform was unveiled at an Open House at the company's global headquarters in St Louis. Danielle Jerschefske reports

Over the course of a three Open House days at its St Louis manufacturing facility and HQ, Mark Andy unveiled its new Digital Series hybrid digital-flexo press in front of more than 200 attendees.

The Digital Series press, built on a Performance Series press platform, has been designed from the ground up seamlessly to integrate a digital workflow with conventional printing and converting. The digital module can incorporate from four to seven color stations plus white. It is claimed the fastest inkjet system in the packaging market today running at speeds up to 250 fpm with six colors and a White. Print resolution is 600 x 600dpi native, with the heads developed by a un-named OEM partner.

The Digital Series press is fully modular, and Standard Performance Series tooling can be installed at any point of the line.

Mark Andy Print Products will distribute the UV inkjet inks, which are specially formulated for these print heads. The system is compatible with pressure-sensitive, tag and thin film materials. BOPP and PET films have tested successfully.

ProWORX, powered by Esko, is the DFE (digital front end) integrated into the Digital Series press, supporting digital file management and workflow between the two technologies. The software automates color management, pre-flighting and job optimization, including operations for using in-line flexo stations to produce value-added embellishments.

Ray Dickinson, Mark Andy vice president, marketing and business development for Digital Solutions, says, 'For the Digital Series press, a new generation of piezo inkjet printhead technology is used in tandem with a new generation of UV curable ink. When coupled together and truly integrated with Mark Andy's web handling and fast change technologies for flexography and converting, the resulting product is nothing short of extraordinary.'

CONVERTER PANEL

The Open House keynote presentation was given by Mark Hanley, president of IT Strategies, which specializes in identifying new markets for color digital printing technologies. 'There is already a sense of possibility about digital print, but we must be careful about what the real value proposition is. The conventional market likes to say that digital is for short run only, but it's not. It's about quick response. We're seeing short run as the effect not the cause.'

A customer panel at the event included Joel Carmany, president of Consolidated Label, who launched OnlineLabels. com seven years ago as a web-to-print operation specializing in short runs of digitally printed labels. Today, the business is using digital for each product market it plays in, and to deliver on a variety of benefits to customers – rapid turn-around time, high quality, cost effective multiple SKU printing and image changes.

Carmany said, 'Digital has changed our business. Our waste is down; our throughput and quality are up. It's about agility. We want to be responsive to our customers' needs and look at our assets as a tool to ship sales today.'

Rick Ferreira, operations manager for Action Packaging and an experienced digital label producer, agreed, 'Even if the label

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MARK Andy Digital Series interface

is more expensive, in emergency times customers don't care about the process. Digital printing gets product to market faster.'

Each panelist managed digital production separately from conventional, because of slower digital press speeds, with die cutting and converting typically completed off-line.

Carmany said he attended the Open House, 'because of the speeds (now) achievable and the in-line die cutting. From my viewpoint, off-line finishing involves more people, more labor and more problems. We don't want to finish in-line with our existing digital presses because it slows production down too much; it's difficult to run one for one.'

Looking at the 2,000 digital presses installed through 2013, it is estimated that 95 percent of digitally printed labels in the global market today are finished off-line.

Ferreira shared his experience: 'Since entering the digital market, we have purchased two more Performance Series presses. With our digital investments, we cleared our conventional press capacity and produce only what should be done with flexo. Now we're intrigued by Mark Andy's converting thought process and offering with the Digital Series.'

Kevin Florence, president and CEO of Genflex Labeling Solutions, entered the digital market in 2007 because of a new opportunity with an existing customer. He said, 'Digital starts to create new markets. The majority of your business will be where you didn't have a market before. It's important to evaluate the type of jobs and customers that fit best with the technology. Still, our flexo work is growing at a significantly higher rate than digital and we require complementary capabilities.'

CONTINUED DEVELOPMENT

After the Open House, Carmany shared his perspective, 'Overall I was very impressed with the Mark Andy digital press for the relatively short time they have been working on the project. It would fit well into our pressroom, as it does not require special environmental conditions. I think there are areas where we will have to study further such as color matching from run to run, how the colors print over the white ink and matching job runs from our existing presses, both digital and flexo. The work at beta sites will answer many of these questions.'

Mark Andy firmly believes there will remain a place for both flexo and digital over the long-term. Said Jeff Feltz, Mark Andy director of business development, 'It's about the right combination and quality, speed and agility. We have found that mix with the Digital Series.'

COMPREHENSIVE OFFERING

Up to the launch of the Digital Series press, Mark Andy has been transformed into a total flexo solution provider. Since launching the Performance Series narrow web printing press line at Labelexpo Europe in 2009, the company has placed over 300 P-Series machines into the global marketplace.

To augment its established Rotoflex inspection-rewinder line, Mark Andy acquired Arpeco in 2010 and has successfully rejuvenated the brand and continued development in horizontal finishing systems alongside the established vertical VSI and VLI lines.

The supplier more recently introduced the ProLED UV curing system and the QCDC converting system for fast die change, each aimed at reducing waste and cost in label production using in-line flexo.

Under Mark Andy Print Products the company has broadened its pressroom supplies portfolio. Mark Andy University ensures press operators are knowledgeable about the latest equipment and well trained to run advanced label business assets.

Kevin Wilken, Mark Andy's president and CEO, appointed in January, stressed the comprehensive nature of Mark Andy's technology and support offering: 'We want to be the supplier of choice throughout the product life cycle, providing complete support and offering high quality innovative solutions.'

A plant tour demonstrated the Lean manufacturing initiatives now in place in St Louis, including new machining equipment. Shop workers were busy putting together a massive 20-station Versa Max lottery press for the Chinese market, along with a number of standard model presses and custom Rotoflex finishing systems.



RICK Ferriera from Action Packaging participated on customer panel



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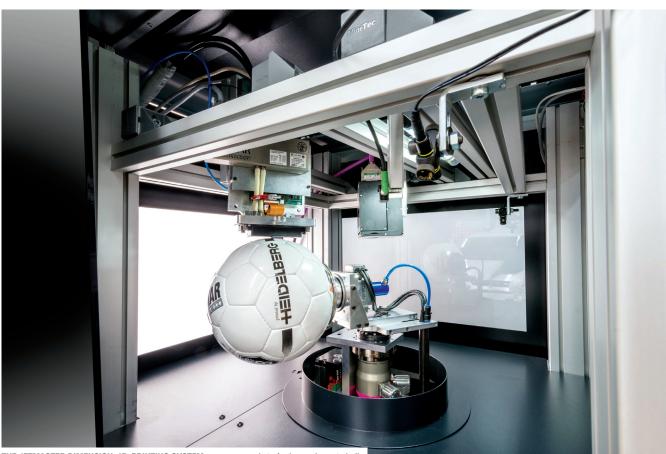
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THE JETMASTER DIMENSION '4D' PRINTING SYSTEM opens up markets far beyond sports balls

Label press leads Heidelberg digital strategy

BARRY Hunt examines the implications behind Heidelberg's recently announced inkjet-based strategy

Heidelberger Druckmaschinen sees its latest digital growth strategy as an essential response to volatile trading conditions in core markets. Aiming to improve net profitability, the German offset press maker will direct almost a third of its R&D resources on a new digital and software portfolio involving strategic partnerships with Gallus (30 percent owned by Heidelberg), Ricoh and Fujifilm. While aimed at core customers, the company's strategy, based on a mix of technologies, is expected to open up untapped markets.

At an international 'Digital Sneak Peek' event held at its R&D headquarters, Gerold Linzbach, CEO, said: 'As part of our expansion in the digital sector, we are investing in technologies such as inkjet printing. We are also exploring printing on threedimensional objects and thus breaking into market segments that are entirely new to Heidelberg. Overall, we estimate that the digital sector offers us sales potential of more than 200 million euro per year (US\$260 million) in the medium term.'

An unnamed inkjet label press heads-up this strategy. A prototype for beta testing is due to appear in autumn. It could even appear at Labelexpo in Chicago. It will include unspecified Fujifilm drop-on-demand piezoelectric printheads, with Gallus supplying the main frame, web transport, UV flexo units, cold foiling and diecutting equipment. The mock-up version shown used a Gallus ECS 340 platform. Jennifer Renner, Gallus's "An unnamed inkjet label press heads-up this strategy. A prototype for beta testing is due to appear in autumn. It could even appear at Labelexpo in Chicago".

director of digital, confirmed that optional LED UV curing was possible, while the Fujifilm ink set will include an opaque white and two hexachrome colors. It will be the first Gallus press to incorporate Heidelberg's established Prinect Digital Print Manager package. This key component facilitates the integration of digital, flexo and offset workflows for different market segments.

Jason Oliver, previously EFI's senior director of Jetrion sales, who now heads up Heidelberg's digital business unit, added: 'Today, just five percent of all labels are printed digitally. However, the demands for customized, costeffective, and versatile printing solutions in this market segment are growing. We are working with our partners Fujifilm and Gallus to present a solution that will meet these

demands perfectly.'

He said Heidelberg has established an advisory council to provide independent feedback. It includes technology and market experts, digital users, and some customers. Kenneth Stack, a former president of EFI-Jetrion who now runs a consultancy, is a member.

SHEET-FED INKJET GROWTH

The tie-up with Fujifilm takes Heidelberg into uncharted territory. Both companies believe sheet-fed inkjet printing has a bright future as a digital alternative to offset production based on conventional B1 and B2 formats (28 x 39 in and 19.5 x 28 in respectively). Duplex/perfecting printing is a possible option. Fujifilm already offers the B2 format Jet Press 720 for folding carton production and is developing commercial applications. It uses Samba piezoelectric print heads made by Fujifilm Dimatix in the USA (formerly Spectra) that are stitchable in lines up to around two meters in length. Heidelberg is using a Jet Press 720 at its R&D facility as a test bed for various paper and film substrates printed with Fujifilm's latest UV inkjet inks. The production of paper and film sheeted labels is a possibility for producing shorter-run quantities, or to customize pre-printed offset sheets.

There is no specific timeline, but both companies will seek to push the project

along. Drupa 2016, or even earlier, may see a prototype or beta-tested model. As one pundit noted, a new generation of 'Fujiberg' industrialized inkjet presses could take the gloss off their nearest sheet-fed equivalent: Landa's Nanography inkjet/offset printing technology. The B1-format Landa S10FC for folding carton production, based on Komori's sheet-fed platform, is expected sometime later this year. As it is, Komori (with Konica Minolta as its inkjet partner) already offers the KM-1 sheet-fed press, while Screen has the Truepress Jet SX in a similar B2 size.

Heidelberg already has extensive digital experience. Products include the sheet-fed, direct-to-plate Quickmaster DI with Presstek, plus the NexPress electrophotographic color press, since sold to Kodak. A three-year-old partnership with Ricoh led to the re-badging of its dry-toner presses as the Linoprint C751 and C901, which can complement Heidelberg's offset presses within an integrated Prinect workflow. Over 400 of the Ricoh-made presses are installed worldwide.

The company already has a foothold in the roll-label business. After acquiring CSAT GmbH in July 2011, Heidelberg modified and rebadged the firm's ITS 600 label press as the Linoprint L, and appointed Gallus as global distributor. It was shown at Labelexpo Europe 2013 running inline with a Gallus ECS C finishing line. In January 2014 Heidelberg – by now in partnership with Fujifilm – sold the business to Markem-Imaje, a global coding and marking systems specialist owned by New York-based Dover Group.

Matthias Marx, Gallus's head of corporate communications, told L&L that the Swiss company will remain responsible for sales and service activities for Linoprint L presses, of which some 25 are installed worldwide. Basically speaking, nothing will change. Gallus will be responsible for sales and service activities. However, a new Markem-Imaje brand, CSAT ITS 6, will replace the Heidelberg brand later this year. But at least everything else concerning CSAT Markem-Imaje remains the same.

Given Heidelberg's close connection with Fujifilm, this raises another question: does it affect the Japanese company's relationship with FFEI (formed in 1997 as Fuji Film Electronic Imaging)? It became an independent company following a management buyout in 2006. Last year FFEI introduced the Graphium hybrid inkjet press in Europe and the USA under the Fujifilm banner in the highly competitive single-pass inkjet market. Xaar and Edale are its other partners. Andy Cook, CEO, said: 'The relationship between FFEI and Fujifilm continues to strengthen with more developments in the pipeline and is not affected by this technology announcement



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from Heidelberg. Fujifilm has some excellent technologies, which it is looking to exploit into as many market segments as possible, and it is natural for them to offer a variety of channels.'

Heidelberg's other digital initiative, the Jetmaster Dimension for '4D' printing on three-dimensional objects, really is a radical move. A compact, three-part system was shown, comprising laser scanning of an object's dimensions, Xaar inkjet printhead, and UV curing unit. Flyeralarm, a German supplier of online printing services, is the first user. It decorates standard sports balls with personalized printing and sells them on its web site. Heidelberg's next step is to move into industrial applications of this direct-toshape technology. Examples include printing logos, text and other decorative elements on body parts in the automotive and aerospace industries.

Oliver said the overall market volume for printing on consumer and industrial products is estimated to be worth several hundred million euros in the medium and long term. He added that Heidelberg and Krones, the bottling line specialist, are examining the possibilities of four-color printing on beverage bottles. Several vendors of direct-to-shape systems demonstrated this application at a recent drinks industry trade fair, supported by key enablers, such as Xaar. There are obvious implications for label printers, which are mentioned in this issue's feature on sheet-fed



INTEGRATING a mix of technologies is a major theme, said Stephen Plenz, Heidelberg board member

labeling.

Heidelberg's headline-grabbing ventures aptly capture today's digital Zeitgeist. We have seen electrophotography and dry toner imaging come of age, while the roll-fed, full-color inkjet sector is settling into distinct segments with new hybrid systems emerging. A new generation of single-pass, inkjet printheads may well take industrialized inkjet printing to a higher level of quality and productivity, of which direct-to-shape technology is just one element. Overall, we are also seeing more practical methods of integrating a mix of these technologies.

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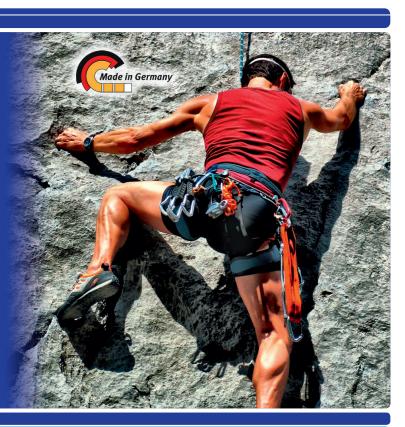
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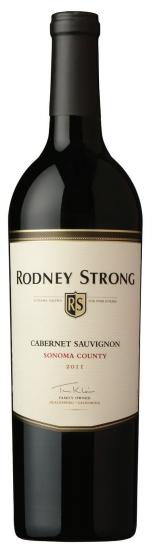


Effective wine brand delivery

CALIFORNIA WINE LABEL experts are leveraging their technical knowledge to drive creativity and value for US wineries. Danielle Jerschefske reports

A label on the bottle is the main means for consumers to distinguish one wine brand from another prior to tasting. The design and content of the label is what reaches out and motivates a transaction in the crowded marketplace away from the vineyard and winery tasting rooms. Therefore, the heart of the brand must be conveyed clearly through the label while meeting aesthetic and budgetary goals.

It is the designer's job to produce artwork that brings recognition and consistency to a brand's message. Achieving this objective – to produce fantastic labels in the most efficient way – requires designers and wine brand owners to have at least a basic knowledge of label manufacturing.



To uncover the nuances of putting together a wine label that truly conveys what's inside the bottle, L&L spoke with experts at Affinity Creative, a wine label, branding and package design firm based in San Francisco, and G3 Enterprises, a fully integrated family business that services the global wine market with packaging and supply chain support.

COLLABORATION

Collaboration between stakeholders is imperative for producing impactful and effective wine labels. If a winery's first communication with a label maker is during the hand-off process, it's too late.

Explains Ed Rice, director of strategy at Affinity Creative, 'Our production experts are involved in all programs from the very beginning — from project kick-off, to creative critiques to production file development.'

'Our goal is to provide the very best creative solutions while remaining fully aware of production requirements,' adds Allen Nauright, Affinity Creative director of production and technical services. 'Knowing technical nuances and capabilities actually gives designers a freedom and confidence to push creative exploration to the greatest extent possible. This is a hallmark of Affinity's success and one of our greatest strengths.'

There will always be compromises between a label's design and final printing, but Nauright says, it is important to know when to compromise and when to hold your ground. 'Whether the client has mandated a particular printing method, or if we have the ability to suggest a specific type of printing process, we do all we can to ensure the right types of compromises are made to be certain the design is printable in that particular reproduction process. If we know the printer and their process and presses, we will know if it can be done. If we have questions about something, our relationship with the printers allows us to easily obtain the answers.'

James Stone, technical business development manager at G3 Enterprises label division, says, 'Experienced designers in the wine category have the knowledge and background to match the capabilities of the printer to the design, and vice versa. We offer suggestions that help reduce changeover time on press, looking at

common tooling, the die line and ink sets when at all possible. And of course we also look at the label size to maximize as much of the web width as possible without generating off-cuts.'

Ed Rice states that the wine producers who get the very best result 'establish an atmosphere of trust, open communication and honest feedback to minimize unexpected surprises, avoid unwanted compromises and meet program challenges head-on without fear of fingerpointing.'

Nauright adds, 'It's important to understand all the details down to how the label will be printed, with which ink formulation and on what press. And this orientation extends beyond printing. For instance, it helps to know details about the bottle mold, the maximum labeling area, and existing die lines.'

'This is so true,' agrees Stone. 'We have often seen a well-executed design and printed label fail on the bottling line due to a mold seam or imperfections in the glass.'

BRANDING

Iconic wine brands use the label as an engagement tool, as a way of conveying the brand's spirit to the consumer. Explains Rice, 'There's so much about the brand focus that must be conveyed



BEER Alcohol Market Share from 2000 – 2011 according to Beer Marketer's Insights, DISCUS, IMPACT Spirits Bank supplies

LEADING BRANDS

The largest growing US-based wine brands in 2012 were: Barefoot, Cupcake, Apothic Red, 14 Hands and Woodbridge (source: IRI market research). The brands are owned by some of the largest regional producers of wine by volume and wine exporters including The Wine Group, E&J Gallo Winery, Constellation Brands and Chateau St. Michelle. California's wine export grew 6 percent in February 2014 (source: The Gomberg Fredrikson report Feb 2014).

in a wine label. It really depends on whom you are trying to reach and under what circumstances. That's where an experienced firm like Affinity can really help.'

Labels need to be designed for the intended category and price point. If you over-design on the label and under deliver on the wine that does no one any good. 'We do a lot of work with tiering systems, low, medium and high,' says Rice. 'The consumer has to see why they're spending five dollars more on a bottle of wine.'

Procurement and the packaging technology folks can be difficult to persuade about the importance of branding and label design when price comes into play. Most wineries evaluate budgets based on cost per case or by calculating the total cost of goods sold. The return on effective brand design is not an easily seen value. Says Rice, 'Physical assets like crushers, tanks and filling lines wear out. Well-crafted brands can live on forever.'

G3 LABELS

G3 Enterprises is based in Modesto, California. The label division has 100 employees and runs 24 hours, five days a week. The converter serves the wine industry, including massive well-known global brands that require upwards of 10 million labels three to four times per year.

The facility is equipped with three 13-inch Mark Andy XP5000 presses, each with 11 color stations. The three web presses offer different embossing, laminating, hot foil stamping, debossing, rotary screen and rotary die stations. G3 makes plates in-house using Kodak's FlexcelNX system.

G3 also has two sheetfed offset presses – one 8-color Heidelberg Speedmaster with UV and conventional drying systems, and a conventional 6-color Heidelberg Speedmaster. Embellishments are made using Gietz stamping and embossing presses and sheetfed labels are cut with a Polar DC-11.

The converter is in the process of installing a new Nilpeter FA-4 press with 11 colors and flatbed die cutting. Stone says, 'We needed inline flatbed capability and Mark Andy has not installed such a system for the wine market. We went with Nilpeter because they have existing systems in other markets.'

G3 delivers great innovation with flexography. For example, the converter recently completed a project using metallic flexo ink with a unique build that gives the look of foil.

COLOR BUILD SAVVY

Faithful reproduction of logo and brand colors is crucial in building consumer confidence in a brand. The best wine label designers understand that blending color in the wrong way during the prepress color build makes the label design hard to reproduce on press. When these problems arise, the best converters work with the project stakeholders so that alterations can be made to improve operational efficiencies and meet the designer's expectations.

Says Stone, 'Gradient blends are always the toughest to reproduce on press. A designer might create a blend using two colors but will generate a comp on an Epson printer that prints in CMYK. This presents a challenge in that the blend on a comp can be difficult to replicate on press.'

Nauright explains further, 'Many times untrained designers will use software in ways that are meant for onscreen viewing instead of printing. Software makes it easy to create blends from one color to another, which looks good on screen and can be produced if you are using 4-color process, but wine labels often require the use of spot colors for their brands and labels.

'If you want to blend from a spot color to another spot color then you need to set up two different blends – one that shifts from a percent of the first color to another percent of the same color then moving to the second blend using the second color. It's knowledge of production nuance like this that separates the experienced professional designers from those who dabble in graphic design.'

THE CONTRIBUTORS



ALLEN NAURIGHT

Allen Nauright, director of production and technical services for Affinity Creative, is a Clemson University School of Packaging graduate, with laser-sharp attention to detail and more than two decades of printing experience. He understands value engineering, and ensuring projects come in on time and on budget by managing the myriad of details that accompanies every printing job.



ED RICE

Ed Rice is the director of strategy at Affinity Creative and former Lieutenant in the US Navy. He has used his insights into strategy and creativity to get increased value from all marketing disciplines, with particular emphasis on naming, branding and packaging design. With Landor Associates he led strategy programs on a wide range of brands in the spirits, wine, beer and other beverage categories including Absolut, Domaine Chandon and 7-Up.

JAMES STONE

James Stone is the technical business development manager at G3 Enterprises. Prior to joining G3 Stone worked at Jonergin Pacific, managing the customer service and digital production departments. He also served as the graphics manager at Label Technology overseeing designers, mechanical artists and the plating department. He was hired at G3 to start up its Pressure Sensitive Division which has grown to include sheetfed offset. Currently he serves as technical support to bottling lines, product development, innovation and sales support within the labels division of G3.



REX Goliath Sangria is a new line extension of the popular brand from Constellation



L-R Jorge Martinez (Etimex), Evaristo Paredes, Lynn Dornblasser (Mintel), Mike Welch (Avery Dennison), Ricardo Rodríguez (HP Indigo), Rob Wallace (Wallace Church)







Etimex runs brand owner event

MEXICAN label converter Etimex recently organized a brand owner event in Monterrey featuring a series of expert speakers. James Quirk reports

Mexican label converter Etimex recently organized 'Brandlabel', a one-day brand owner conference at the Cintermex center in Monterrey.

Featuring presentations from market research company Mintel, New York-based packaging design firm Wallace Church, Avery Dennison, HP Indigo and Etimex, the event on March 18 attracted 128 attendees, mostly from food, beverage and consumer products manufacturers from northern Mexico.

'Brandlabel's aim was to highlight the importance of packaging as a fundamental part of the commercial success of a product – in every aspect from its creation, material choice, importance of colors, ergonomic use, and the graphic label itself,' Etimex's Jorge Martinez told L&L. 'We sought to eliminate myths and fears about the costs of investing in packaging by showing successful case studies from Coca-Cola, Procter & Gamble, Frito Lay, Heineken and others.

'Our message was that today the technology exists to produce high quality and impactful packaging that can compete with major brands even with small volumes. It was made clear that packaging sells, and therefore it represents a profitable investment.'

Ricardo Rodriguez of HP Indigo gave a presentation on digital printing innovation in labels and packaging; Mike Welch of Avery Dennison discussed methods for creating brand awareness and the importance of products fighting for shelf appeal.

Rob Wallace of Wallace Church spoke about consumer behavior and gave a recent history of customized branding. He discussed the packaging design company's partnership with HP Indigo and US label converter ILS.

Lynn Dornblaser of Mintel tackled a series of topics in four separate presentations, including the opportunities presented by packaging for seniors, why customization is important to consumers, and how to reinvigorate brands through packaging.

Evaristo Paredes of Constantia Flexibles in Mexico, who also works as a packaging consultant to food brands, gave a case study, while Etimex's Jorge Martinez provided the label converter's perspective with a presentation on labeling's role in stimulating the visual senses.



THE Lobo Impresores team with the certificates

LOBO IMPRESORES RECEIVES HONORABLE MENTIONS

Mexico-based label converter Lobo Impresores received two honorable mentions at the 34th edition of the National Graphic Arts Awards on April 3 in Mexico City, organized by UILMAC, a local offset printing union.

The honorable mentions both came in the flexography category, in the 'labels printed without special processes' subcategory, for the company's jobs Atole de Cereales and Dános 5 Segundos para Sorprenderte! ('Give us Five Seconds to Surprise you!').

'The "Give us Five Seconds to Surprise you!" label was created for one of our campaigns and aimed to reflect who we are at Lobo Impresores: our innovation, dynamism and the experience we have gained over more than 30 years of label printing,' said operations director Keren Becerra. 'The job had to show this to our clients using a label which they would have in their hands for only five seconds. The label really gave us what we were looking for, from Christine Cueto's excellent design through to the printing process, we were all involved as a team and it was a great result.'







"Primera is the way to go."

When Lloyd at Taylor Label in Toronto, Canada, was looking for a way to get into digital label production, he turned to Primera's CX1200 Color Label Press and FX1200 Digital Finishing System.

"I checked out all of the options. Primera just made the most sense. It's a professional solution that gives me the capability to digitally produce labels in any size and shape. Now that I've got a system installed, I can see that my payback is going to be faster than I'd even hoped. If you're a label shop that wants to get started in digital, Primera is definitely the way to go."



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Label design re-positions artisan brand

SIMPLIFIED labels have helped an artisan food manufacturer in the UK boost its business, reports David Pittman

For Margate Smokehouse, like every other brand from the smallest to the biggest, packaging is a key part of its brand identity, and when feedback that its early versions weren't fitting the bill, it moved to re-approach its labels and labeling.

Launched in October 2013, Margate Smokehouse is an artisan food manufacturer based on the east Kent coast in the UK. Its products include a variety of smoked items, from fish, meats and cheeses to vegetables, salt, pepper and oils. All of its products are cold smoked in the company's own custom-built brick smoker over oak chippings and sold primarily at farmers markets and food festivals throughout Kent.

In terms of production, everything is completed in-house – from sourcing the raw ingredients, through preparing, curing and smoking to packaging and delivery. This includes the application of labels.

Sharon Harrison, director at Margate Smokehouse, says: 'Our previous labels were black with blue writing, much larger and attached by using glue/ribbons etc, which took a lot of time especially as the business has grown so quickly. We also found through discussions with various retailers that our packaging was difficult for customers to read, was too big and wasn't really conveying our vision for the business.'

As part of an initiative to enhance its offering, Margate Smokehouse has undertaken a broad program of developments, including redesigning its labels and launching a new online presence with e-commerce capabilities.

This has been made a reality through working with Dirk Mürlebach of design studio Campanero. 'Sharon came to me with her old design which didn't in any way reflect the quality of their products. I also wanted to bring the seaside location to the fore as this area is one of the prettiest in Britain, but didn't want to be too obvious either.'

To achieve this, Mürlebach's refreshed label design for Margate Smokehouse incorporates a blue sky with a wooden



deck. 'It brings the handmade and very special way the products are produced to light and makes sure they aren't seen as mass produced products,' Mürlebach says.

The labels themselves were offset printed in Germany in CMYK on a KBA Rapida 142. Other tools used in the production included a Kodak Magnus VLF Platesetter with APL and Prinergy pre-press workflow system.

The printer employed by Mürlebach works to the Process-Standard Offset (PSO) standard, which was developed by Fogra in co-operation with the German Printing and Media Industries Federation (BVDM). It is the description of an industrially orientated and standardized procedure for the creation of print products. The PSO is in conformance with the international standardization series ISO 12647 and therefore internationally recognized.

'With PSO, the offset print production is qualitatively ensured from the data generation to the printing result,' says Mürlebach, 'which is a nice feature of my printer'.

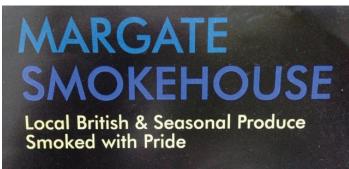
'What makes him also very valuable to me is that he can offer me products like stone paper, which is made of 70 percent chalk and 30 percent bio polyethylene (read more about stone paper in the 2014 spring/summer issue of *Packprint World*) and feels like it is made of velvet and silk. It is water- and tear-proof, food-safe, of low flammability, suitable for outdoor use, recyclable and cradle-to-cradle certified, and uses a lot less water to produce compared to paper.'

For Harrison, the project has helped refocus Margate Smokehouse's go-to-market initiatives. 'We wanted an image that was clean, fresh and something that would stand out and become synonymous with Margate Smokehouse. Dirk immediately understood what we needed and wanted and he helped design the new labels, website etc and saw our vision through with us.

'We had many discussions regarding the size of labels, how they would be attached, etc, and we are absolutely thrilled with the smaller labels which immediately impacts on the retailers as we can use smaller vac bags for our products, allowing them to stock more and saving us money on packaging.

'The new labeling is smaller, cleaner lighter and fresher,' Harrison adds, 'whereas previously customers had difficulty in identifying the product name as blue on black was difficult to read. The new labels are very clear and the same ideas flow through each label, which is good for our brand.

'The labels can also now be applied as stickers, they are smaller and so far they have been well received by customers and retailers. Our customers have also advised us that the smaller sticker is great as the larger labels were getting bashed or knocked off too quickly and taking up to much space in their fridge.'



THE old Margate Smokehouse label



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INSTALLATIONS

SPGPRINTS DSI

MCLOONE (US)

McLoone, a La Crosse, Wisconsin-based supplier of industrial labels, decals and nameplates, has installed a SPGPrints DSI UV inkjet label press in order to bring about production efficiencies and penetrate the mid-run self-adhesive decorative label market.

SPGPrints – formerly known as Stork Prints until November 1, 2013 – custom-built a 13in (330mm) version of the DSI for McLoone as a stand-alone printer with CMYK plus opaque white. With speeds of up to 114ft/min (35m/min), the DSI will be responsible for 25 percent of McLoone's production, approximately half of the company's flexible material output.

McLoone also carries out numerous finishing operations, such as lamination, embossing, doming and die-cutting, offline. However, thanks to the DSI's modular design, the company's stand-alone version can be retrofitted with any AB Graphic International semi-rotary converting equipment, including laser die-cutting and up to six additional colors, at a later date.

At present, McLoone's DSI system prints on exclusively plastic substrates, including polycarbonates, vinyl, polypropylene and polyethylene, between 51 microns and 254 μ m microns. The DSI's chill drum, which comes as standard, ensures these heat-sensitive substrates remain at a constant, cool temperature, eliminating the risk of material shrinkage, and ensuring stability through the print process.

The first large-scale roll-to-roll printer in McLoone's 60-year history, the DSI offers a leaner and shorter workflow than its existing flat-bed screen printing and thermal transfer machines.

Keith Rosenthal, vice-president of manufacturing at McLoone, said: 'We sought a solution that would reduce costs and set-up times when printing runs from just a few hundred units, and give us the necessary productivity to compete for orders of up to 250,000 labels. SPGPrints' DSI press was the perfect choice thanks to its robust, ergonomic build, modular design and ability to deliver controlled quality on a wide range of plastic substrates.

'The DSI has given us new levels of flexibility. We can print all colors in a single pass, eliminating the logistically intensive task of printing each color on a separate machine., and reducing the production steps from 30 to just six. We can run 20 micro-runs consecutively in less than an hour, whereas before on a screen press, this workload would have taken three days.'

Rosenthal added: 'A large proportion of McLoone's DSI-printed work is identification products such as nameplates and warning labels, for electronic goods including kitchen and garden appliances. It is vital that the label graphics last the lifetime of the products they adhere to. This can be many years, during which they must withstand abrasion, sunlight, and sometimes, extreme outdoor conditions. We exposed SPGPrints' inks, and the substrates, to numerous substances, from foodstuffs to aviation fuel, as well as accelerated weathering tests. The excellent test results gave us the assurance that the DSI and its inks could meet the most demanding customer expectations.'

NILPETER FA-4*

RAQAM INTERNATIONAL LABELS & RIBBONS FACTORY (SAUDI ARABIA)

Raqam International, a leading manufacturer of high-quality labels, based in Riyadh, Saudi Arabia, has added two new FA-4* presses to its operation to meet the increasing demand.

These two Nilpeter multi-substrate flexo presses are



SAUDI converter adds two FA-4 presses

an addition to its two Nilpeter offset MO lines already in production.

Due to the increasing demand for high-end labels for the pharmaceutical industry and fast-moving consumer goods, Raqam International saw a need to expand the company's production capacity. 'To confront the imminent need for more volume in our production, we went looking for a flexo press with a consistent quality in repeat jobs, the fastest possible setup, optimum printing quality, and an overall focus on productivity,' said general manager Khalid Aziz Shah.

'We selected the Nilpeter FA-4* based on its superior design combined with Nilpeter's outstanding service. We are very happy with the new capabilities and opportunities these new presses will bring us.'

GALLUS EM 280 RAJ PRINTS (INDIA)

Raj Prints has diversified into label printing under a new company, Magnum Labels.

A fully loaded eight-color Gallus EM 280 was booked at Labelexpo Europe 2013 and was delivered at the plant in February 2014. For finishing of labels, the company has imported a Brotech FS 330 from China.

With a total investment around one million USD (Rs seven crore), Magnum Labels is targeting the automobile and pharmaceutical industries. The ISO 9001 certified plant is spread across an area of 3,000 sq ft.

MARK ANDY PERFORMANCE SERIES P5 FIBRAFIL (PERU)

Peru-based label printer Fibrafil has purchased a Performance Series P5 flexo press from Mark Andy, the first of the series sold into the Latin American country.

The Performance Series P5 sold to Fibrafil is a high-efficiency narrow web flexo press that will be used to produce labels to meet growing demand in the region.

Sold through local Mark Andy distributor Ferrostaal Peru, this is the first Performance Series press to be sold into the Latin American country. The Performance Series P5 will be the second narrow web label press for the Lima facility.

The 17in (430mm) UV/water-based combination press is equipped with nine print stations, chilled impression rolls, pre-register, auto-register and Quick Change Die Cut die station. Rail mounted accessories include a web turnbar, cold foil and CT lamination capabilities.

Intended to primarily support pressure sensitive label production, the machine is also capable of running PET materials at speeds up to 750ft/m (230m/min).

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MPS launches its 'most affordable' flexo press

THE NEW EB PRESS line is targeted at dedicated PS label converters who require MPS quality without highlevel automation. Andy Thomas reports

At a recent Open House at its Didam, Holland headquarters, MPS unveiled its new EB flexo press. A print station was previewed on the MPS stand at Labelexpo Europe in Brussels last year.

'The main design goal of this press is to deliver optimal performance, MPS high print quality and operator friendliness, while reducing overall printing costs,' explained MPS co-founder Eric Hoendervangers.

The press can be considered MPS 'entry level' machine but retains core technologies found on the company's more highly automated press ranges.

The Crisp.Dot Light technology implemented on the EB press range is claimed to eliminate gear marking, since there is no gear connection between impression and plate cylinders. 'This means the gear profile has no influence on the pressure settings, so cannot affect consistent print quality – particularly important when printing vignettes and solids,' says Hoendervangers.

The 'Light' moniker comes from the fact the impression cylinder – and not the chill drum – transports the web, so cannot be rubber coated, as on MPS' other presses.

The new patent-pending iSet technology developed by MPS for the EB press provides a user-friendly way to regulate settings between impression, print and anilox rollers, without influencing each other. iSet allows not only the left and right pressure settings of the plate cylinder/anilox roller to be set, but also the parallel pressure settings. iSet utilizes a knob, which provides a straight-forward process for the operator to scale through 'click steps' to the desired setting. The knob includes a scale for an accurate reference of pressure settings.

The third key technology is iStop, which optimizes stops and starts during UV flexo printing and minimizes waste through material roll changes. When the press is stopped, the print cylinder and anilox roller remain in print position. Once the operator changes rolls and re-starts the press, the print units resume printing immediately, without any web waste.

Other established MPS technologies include Solid Lock, which allows the print cylinder to be positioned automatically into the print head, independently of repeat size. The plate cylinder position to anilox and impression cylinder is automatically set, meaning print pressure or setting corrections do not influence print quality.

The press incorporates a rail-mounted cold foil station, delam/relam and turnbar. Each station has finger guard protection for EC compliance while retaining easy access. All the inking system components are the same as on MPS's advanced press ranges and the EB machine has the same cantilevered iStrip matrix rewinding system. This allows the press to die-cut and strip matrix at very high press speeds, even when the label shape and/ or material is very difficult to strip.

Key differences with MPS' automated multi-substrate presses include: no auto-register as standard, which MPS says is not required on a single operator driven machine, and optional chill drum technology, as the press is targeted squarely at PS label production.

'We have aimed at the well-known MPS quality and a flexible but limited specification for a lower press price,' says MPS technical director and co-founder Bert van den Brink. 'This is the lowest price for which you can buy authentic MPS technology.'

The EB press line has a print width of 360mm (14.17in), with a roll width of 370mm (14.5 in). The press is optionally available with a short web path – for converters who need to further reduce makeready waste. It can be fitted for both UV and water-base inks.

MPS EB press

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HP announces Comexi alliance

HP INDIGO has extended the capabilities of its HP Indigo 20000 digital press through a strategic alliance with flexible packaging specialist Comexi. Andy Thomas reports.

HP has made a significant step forward in enabling conversion of short run flexible packaging by signing a strategic agreement with Comexi Group to develop an advanced solvent-free lamination solution optimized for the HP Indigo 20000 Digital Press.

Lamination is a major part of the flexible packaging conversion process. Current technology requires long set-up cycles for each job, and converters need to wait several days for complete curing and delivery.

The Comexi Nexus L20000 is claimed the first dedicated lamination and coating solution for digitally printed flexible packaging. In inline and off-line connectivity with the HP Indigo 20000 will be available.

'Shorter product life cycles and customized packaging are driving growth in short-run jobs that demand fast turnaround times,' said Ramon Xifra, vice president, Comexi Group. 'The new Comexi Nexus L20000 with the HP Indigo 20000 will enable flexible packaging converters to meet these demands and grow their businesses.'

The HP Indigo 20000 mid-web digital press can print 736 mm (29-inch) wide images on a wide variety of substrates from 10 to 250 microns.

HP Indigo Electrolnk is safe for printing on food packaging for non-food contact surfaces under set conditions of use and compliance with Good Manufacturing Practices (GMP).

Announcing the agreement at a press conference at the Interpack 2014 trade show, Alon Bar-Shany, vice president and general manager, HP Indigo Division said: 'As we drive the digital revolution in flexible packaging, it's important that our customers benefit from the full value of digital across the printing, converting and lamination processes. With the Comexi Nexus L20000, converters will be able to increase speed to market to further maximize the benefits of digital printing with the HP Indigo 20000.'

Comexi Group will showcase the Comexi Nexus L20000 in Q3, when the company will have a significant presence at Labelexpo Americas in Chicago. Availability is expected in early 2015.

WIDER CAPABILITIES

At the Interpack press conference, Steve Nigro, senior VP Inkjet & Graphics of Hewlett Packard Company, stressed the importance of the wider packaging industry to the company's future growth. Negro estimated the packaging market to be worth 11.5bn USD, one third of the total graphics market, with labels accounting for two and a half billion USD. One third of HP's Indigo's revenue currently comes from labels, which is expected to grow at over 9 percent through 2016. Nigro said 24 billion labels were produced by HP Indigo presses in 2013.

'Labels has given us the foundation to expand into other packaging markets,' said Nigro. 'They are increasingly being driven by the same trends: theme-based packaging, micro-segmentation – geographic, event driven and demographic – and SKU proliferation.'

Nigro announced development of an HP inkjet press for the corrugated litho-lam pre-print market, and on a Scitex 15000 flatbed press was demonstrated printing digitally direct to corrugated.

In a presentation on the packaging market, Alon Bar-Shany said label volume printed on HP Indigo presses had increased 25-fold between 2002 and 2013, with a big acceleration of volume growth – 250 percent – since 2010. Over 600 digital label presses are now installed including 100 multi-press sites.

Turning to HP Indigo's 4th generation platform, Bar-Shany made the interesting observation that some commercial sites are already printing digital cartons on their HP Indigo 10000 digital press, of which 100 have now been sold to 25 countries. 'This demonstrates a pent up demand.'

Bar-Shany said that Beta customers for the HP Indigo 20000 press now include Wipf in Switzerland, Seikou in Japan, RAKO Germany and ILS in the US. 'These presses are being used for both flexible packaging and labels. Wipf is producing pouches which demonstrates the food packaging print capabilities of the press.' Bar-Shany said 20-40 jobs a day is optimum for these presses.

Wipf presented HP Indigo 20000 printed flexible packaging product samples at its Interpack booth, where it launched its unique digital print capabilities to the market.

The HP Indigo 30000 Folding Carton press is installed in customer launch sites at Nosco Solutions in the US and Heret Printing, Israel. HP's partners in this sector include Kama with its DC76 die-cutting unit and the new SBU stripping and blanking unit, along with the TRESU Icoat 30000 in-line selective coater. 'In just ten minutes we can change between three substrates,' said Bar-Shany.

New packaging presses installations were announced for the HP Indigo 20000 at Emerald Packaging, California, as a beta customer and an HP Indigo 30000 for FLACH Packaging in the Netherlands.

Swiss-based flexible packaging specialist Kleiner AG was demonstrating HP Indigo digital press print samples on its Interpack stand alongside gravure and HD Flexo samples, and a new machine is due to be installed shortly.



WITH HP Indigo 20000 Digital Press (L-R): Eduard Albo, Comexi; Simon Lewis, HP; Alon Bar Shani, HP; Ramon Xifra, Comexi; Stephen Nigro, HP

NEW PRODUCTS



LF350 DIGITAL LABEL CUTTER AND LAMINATOR IMPRESSION TECHNOLOGY EUROPE

Impression Technology Europe (ITE) has launched the LF350 to follow in the footsteps of the Eclipse LF3.

ITE said the Eclipse LF3 has been a worldwide success, and led its research and development team to develop the larger, floor standing LF330, which could handle media widths up to 330mm, compared to 220mm on the LF3.

The LF350 is capable of handling web widths between 100mm and 350mm, and also features a paper out sensor, built-in cutting light and can handle a maximum label length of 800mm.

As with the LF330, slitting is handled by up to five separate knives and the independent twin cutting heads can produce up to 10.2m of finished labels per minute. The twin cutting heads are complimented by double reversible rewinds. Where lamination is concerned the LF350 handles self or supported types and also has full waste matrix removal.

PRIMER FOR IML ON XEIKON PRESSES MICHELMAN

Michelman has added a new primer, DigiPrime 4453, formulated for use on Xeikon digital presses, especially suited for in-mold label applications.

DigiPrime 4453 is a water-based, water-resistant primer that promotes adhesion of Xeikon electrophotographic toners to most paper and film substrates. It is particularly effective for difficult applications such as in-mold label printing, Michelman said.

DigiPrime is Michelman's flagship brand of digital press primer, and is designed to improve ink receptivity, rub resistance and image quality on printed materials. As a 100 percent aqueous product, DigiPrime is a 'safer option for operators and the environment than some alternatives', Michelman said, and does not yellow or lose its print receptivity over time.



2 ARTPROOF INSPECTION SOFTWARE GLOBAL VISION

Global Vision has released ArtProof, claimed the world's first 64-bit artwork inspection software compatible with both Mac OS and Windows environments.

Developed with enhancements for the graphic design, pre-press and printing industry, ArtProof inspects artwork with pixel precision, increasing packaging accuracy while reducing approval times.

ArtProof detects and identifies missing or added text, graphics, incorrect fonts and text sizes, as well as color deviations.

ArtProof supports one-bit TIFF files and is built using a 64-bit architecture, and can inspect imposition files, colors, graphics and copy. It supports live and outlined text, and auto-locates repeats and offers die line management. Automated booklet inspection is also possible.

EXACT SCAN FOR SPECTROPHOTOMETER X-RITE

X-Rite has launched eXact Scan, an option that extends the functionality of the X-Rite eXact spectrophotometer platform.

eXact Scan adds speed, flexibility and new quality control tools to the eXact color measurement instrument for the printing and packaging industries.

The eXact Scan option extends the instrument's ability to accurately read conventional and non-continuous strips for quality assurance applications, such as flexo printing for packaging, as well as being suitable for offset litho printers that have large capital investments in older presses that aren't equipped with in-line color measurement capabilities.

In addition, eXact Scan can transfer data to an application such as Microsoft Excel for further analysis, and integrate with the new 2.5 release of ColorCert: X-Rite Edition.

X-Rite said that, when combined with its InkKeyControl software, eXact Scan enables color management at a low cost of entry, so enabling printers to extend the useful lives of their presses. InkKeyControl allows printers to target faster make-ready times and improve quality control through control of ink keys. It displays real-time measurement results in a 'traffic light' report, which enables press operators to quickly manage changes as they print.

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Springfield installs Europe's first Screen L350UV

THE UK's Springfield Solutions has become the first European customer for the Screen Truepress Jet L350UV digital label press. David Pittman reports

UK label and packaging specialist Springfield Solutions has become the first converter in Europe to invest in the Screen Truepress Jet L350UV digital label press, as it continues to evolve into one of the continent's leading all-digital label printing firms.

Springfield Solutions already operates a trio of HP Indigo presses, which are used to produce self-adhesive labels, shrink sleeves, peel and reveal labels and for variable data printing.

This has now been augmented with a 570,000 GBP (950,000 USD) investment in inkjet technology that doubles the company's label printing capacity and enables it to develop new label and package printing applications.

The Screen Truepress Jet L350UV is a single-pass UV inkjet label printing system offering 600 x 600dpi resolution at a print speed up to 50m/min (164ft/min). It has a maximum print width of 322mm (12.6in) and repeat length of 50.8-2,400mm (2-94.4in). It can handle media widths up to 350mm (13.7in) and rolls to 750mm (29.5in) diameter.

Screen supplies its own proprietary L350 inks for the press, with CMYK as standard and optional white. Other options include web cleaning, mark sensors and a corona unit.

Springfield Solutions director Matt Dass says: 'We made the decision to become an all-digital label printer back in 2011, and since then the market has evolved in a way that supports this move. As a result, we're always looking at ways to improve our offering and portfolio through the latest advances in technology.'

The company saw a 26 percent growth in print turnover in 2013, according to operations director Dennis Ebeltof. 'While run lengths are decreasing, the number of label variants is increasing quite significantly. In just a year the number of jobs we handle has jumped from between 800-1,000 a month to 1,500 a month at an average run length around 300 meters each – although run lengths can go as high as 10,000 meters. Our clients are constantly requesting faster turnaround times and without digital printing technology we couldn't meet these tight deadlines.'

Matt Dass has been monitoring the inkjet market for a number of years as the technology evolved. He draws particular attention to the 50m/min printing speed of the Truepress L350UV and the optional white, which allows the production of vibrant images on transparent film or metallic foil.

'As inkjet technology has developed, so the case to invest and add its capabilities to our portfolio has become more compelling,' said Dass. 'We are aware that there are a lot of others making developments in this space, but we have previous knowledge of Screen so felt comfortable investing in its technology.' New opportunities the press will open up include shrink sleeves, security applications and flexible packaging.

The Truepress Jet L350UV comes bundled with Screen's Equios for L350 workflow. GMG color management tools ensure that the new Screen and existing HP Indigo presses are calibrated to deliver the same results on metallic foil,

"As inkjet technology has developed, so the case to invest and add its capabilities to our portfolio has become more compelling"

transparent film, PP, PET and paper substrates, and to give Springfield Solutions the flexibility to allocate jobs to any press, right up to the last minute.

'It's a significant endorsement of our technology that such a leading digital label printing company has chosen it to drive the next phase of growth,' says Brian Filler, president of Screen Europe. 'Springfield Solutions has huge confidence in how the press can expand production capacity and enable it to develop new label products and open up new creative market opportunities. A lot of converters will pay attention to what Springfield Solutions is doing in the market, and where it leads others will follow.'

Screen Europe recently opened European demonstration centers in the UK and Germany in tandem with distribution partner Dantex.



BRIAN FILLER (left), president, Screen Europe. and Dennis Ebeltoft, operations director at Springfield Solutions

JULY 2014 | L&L

Munksjö and RecuLiner. Together we give paper release liner a new life.



A new partnership to develop recycling of paper release liner into the production of Cellulose Fiber Insulation (CFI) material. An important step towards a more sustainable labelling.

Munksjö, one of the leading release paper producers, joins forces with RecuLiner to open an innovative new path for recycling of silicone coated release liner from pressure sensitive adhesive labeling. RecuLiner proprietary technology turns release liner waste into the perfect material for thermal and sound insulation of buildings. The environmental benefit of recycling is coupled with that of energy saving provided by the end product. Following the agreement, Munksjö offers this new recycling option as a part of the Full Circle recycling program, extending its coverage from Germany to Benelux and France.

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Delta showcases complex converting

AN OPEN HOUSE at Delta Industrial saw the company demonstrating complex converting lines and a new laser cutting module. Danielle Jerschefske reports



A highly specialized converting system was on demo at the supplier's showcase

Delta Industrial hosted a successful Technology Showcase at its headquarters in Minneapolis in April. The two-day event explored the latest trends in the converting, finishing and packaging industries. Around 200 attendees participated in educational seminars with industry leaders, reviewed complex converting machinery equipment running live and learned from Delta's component suppliers about the latest technology developments.

NEW PORTABLE LASER MODULE

Delta Industrial has spent a lot of time in the last few years developing its Delta Edge laser die cutting technology. By 2013 the company had installed 1,150 laser die cutting systems around the world for a wide range of applications.

At the showcase, Delta revealed its latest portable laser module, with onboard chilling, ventilation and controls that can be easily moved throughout a manufacturing plant.

This laser module is designed to take the place of a die station and is compatible with a rotary converting or digital print finishing system. It can also be used as a standalone sheet-fed system. The integrated chiller and ventilation system is fully enclosed in the sturdy cabinet with its own Delta HMI. The entire unit is mounted on casters making it completely portable.

A laser is simply a highly focused, tightly concentrated beam of light. The power of a laser can be varied by changing the wattage and the frequency. Increased wattage means more light, while frequency is how fast the laser pulses. In this way a single cutting unit can be used to cut a variety of products.

The focused energy of the light vaporizes whatever material is in its path. For the production of diagnostics and other complex medical products, lasers make a clean cut that eliminates the need to remove any material scraps.

A laser system for die cutting offers great flexibility within a converting operation. It can be turned rapidly on and off to create specific shapes, designs, patterns, and types of cuts. Joel Oakes, a systems design engineer at Delta Industrial, explained: 'Being able to change the power allows a laser cutter to handle substrates of differing types and thicknesses. A laser module installed at a label converter may be cutting a label just one mil thick, but another more powerful machine using essentially the same technology can be used on much thicker and harder material used in a medical diagnostic item.'

Both high-tech systems will be used for advanced training sessions and will be available for personal tours and demonstrations over the next few months.

CONVERTING MEDICAL PRODUCTS

Delta's Mod-Tech converting and packaging line was demonstrated producing a complex medical application – a 'transdermal' patch in a foil pouch. The part was made of a challenging polyurethane and featured sequential numbering using Domino's K600i monochrome inkjet unit, multiple die cuts, heat seal packaging and robotic placing.

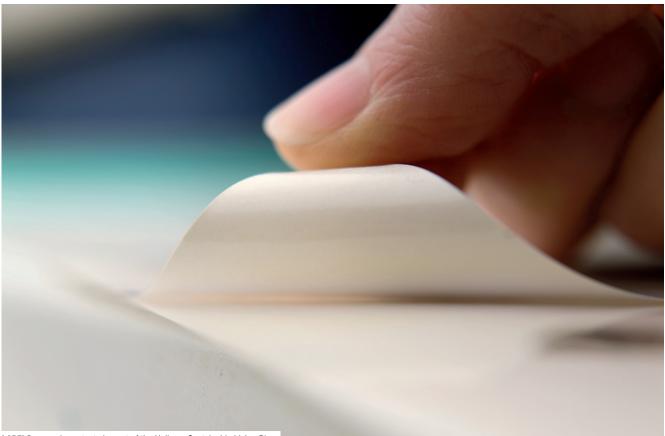
The system is armed with a variety of features to support inline converting: corona treater, semi-rotary island placement, knife bullnose, male/female embossing, a spreading conveyer, web re-registration to die vision inspection and reciprocating heat seal packaging.

After using island placement to cut the expensive transdermal coated material, leaving as little waste as possible, the pieces were embossed around the edge to protect the material while inside the packet. Then the pieces were transferred onto a new web and spaced farther apart with the spreading conveyer. The foil pouch material made by Glenroy was introduced to the line after the pieces were spaced so they could be effectively sealed around each piece.

Delta's manufacturing facility is 150,000 sq ft and the family owned and operated company employs 90 people. Delta Industrial's founder and president Dave Schiebout is in the midst of succession planning, handing the leadership reins over to his son Evan and daughter Wendy, to guide the business as the next generation.



DELTA Industrial's new portable laser die cutting system



LABELS are an important element of the Unilever Sustainable Living Plan

Unilever plots label future

UNILEVER is working with the label industry to design the labels of the future as it looks to 'sustainable growth' in the years ahead. David Pittman speaks with Dave Hall, Unilever's global procurement manager for decoration feedstock about its work with UPM Raflatac to make this a reality

Unilever's Sustainable Living Plan (USLP) has established some high-level targets for the global CPG to improve global health and well-being and reduce the company's environmental impact.

The intention is that, by 2020, Unilever's growth will be decoupled from its environmental impact, and its positive social impact will increase.

This work is supported by seven commitments underpinned by targets covering social, environmental and economic performance, from the sourcing of raw materials all the way through to the use of products in the home, and their subsequent disposal (see boxout). Strong progress has been made since the plan was launched in 2010.

For Unilever's Dave Hall, global procurement manager for decoration feedstock, labels and packaging have an important, if not dominant, role to play in the realization of the company's USLP.

'The USLP covers the entire operation of Unilever, from ingredients and manufacturing to packaging and distribution. All the different constituent components that go into producing our products are focused on evolving them so that they are future fit and sustainable. It covers all packaging aspects from labels and the shrink-sleeves we decide to use, to flexibles and fiber-based packaging.

'While the overall impact of labels is relatively small, when you look at the number of products we offer globally, the impact adds up. Thousands of SKUs alone use labels and shrink-sleeves so decoration must be aligned with the global Unilever

strategy to reduce environmental impact.'

It is in this light that Unilever has been working with UPM Raflatac on investigating key elements of the lifecycle of its labels, covering topics such as material selection, printing and recyclability. The initial work in this partnership saw the print process modelled and incorporated into the lifecycle analysis (LCA) with input from printers, including flexo, offset, gravure and screen. Three product ranges covering 22 different Unilever labels were used as the basis for the data.

This revealed that printing can account for as much as 59 percent of the environmental impact of the label, or as little as four percent, depending on the complexity of the printing process and raw materials used.

'We have never truly been able to measure the full impact of our labels across their lifecycle before, but UPM Raflatac offers us knowledge and experience from the raw material side, while we bring a vast knowledge of the consumer environment,' says Dave Hall. 'We have been able to walk through the full lifecycle of a label through this collaboration, and this has provided us with a more complete datasheet from which to base future decisions regarding things like material selection.'

The lifecycle investigation also included the end-of-life cycle of labels as well. 'Liner is a key component of the label process,' says Hall, 'as is as the ability to remove the label from the container to allow it to be fully recycled.

'This is where the ability to link our knowledge with that of a material supplier like UPM Raflatac has allowed us to produce a deeper LCA.'



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RELEASE liner can be collected and recycled through UPM Raflatac's RafCycle waste management concept

UPM Raflatac offers the RafCycle system, where industrial labelstock by-products are given a new life as the raw material of UPM ProFi biocomposite products, an energy source at UPM paper mills or a raw material in paper production. Investigating the opportunities offered by RafCycle for more extensive liner and matrix waste recycling will form part of the next phase of the LCA.

'Liner is already recycled by our facilities, and is managed on a factory-by-factory basis. We have put UPM Raflatac in contact with key people at our operations, primarily in Europe, to investigate and evaluate the opportunities presented by RafCycle, and see whether it is in our interest to adopt the concept and, if so, how this could be actioned.'

'The LCA has really supported the wider Unilever environmental strategy and given us the tools to make decisions that will have a tangible effect,' Hall continues. 'It has allowed us to establish which materials have potentially greater environmental benefits, question the materials we currently use and ask what the impact would be if we substituted them for something else. We have never really had that level of information before, and are now formulating a number of strategies based on the data for the more environmentally beneficial materials we have been able to measure through the LCA.'

'We only see the future going one way and that is towards thinner, down-gauged materials. It is important however that labels remain fit for purpose. This is where the knowledge of industry partners such as UPM Raflatac comes in, as we can use their understanding and skills to move towards the most environmentally suitable label option but which maintains the quality and functionality required to sell a product. After all, that is fundamentally what labels and packaging do, so tomorrow's label materials must be more beneficial to the environment but still be visually different and help products stand out on the shelf.

'Clearly, what the materials of the future are is still to be decided, but finding out how we get there through partnerships with the label industry is going to be key.'

This extends beyond materials. Future elements of Unilever's LCA model will include the environmental impact of dispensing and labeling, and digital printing, plus other elements of a label's make-up, such as inks.

'Clearly, materials are important to the environmental equation, but inks are there too. We rely on each segment of the market to keep us informed about developments in their segment. It has got to be a collaborative effort across the supply chain to achieve sustainability goals,' says Hall.

'Like materials, the challenge is to bring future inks to market without detracting from aesthetics of the packaging as we cannot compromise on look or feel. That is what sells products and the next generation of materials and consumables has to continue to deliver this.'

UNILEVER DETAILS USLP PROGRESS

Unilever has reported a third year of good progress on its USLP, and an intention to expand further its sustainable living ambition to bring about broader change on a global scale.

Unilever's Sustainable Living Plan is supported by seven commitments underpinned by targets covering social, environmental and economic performance – from the sourcing of raw materials all the way through to the use of products in the home, and their subsequent disposal. The seven commitments include: health and hygiene, improving nutrition, greenhouse gases, water, waste, sustainable sourcing and better livelihoods.

Unilever chief executive officer Paul Polman says: 'In the three years since we launched the Unilever Sustainable Living Plan we have learned that sustainability drives business growth and a much deeper connection with our employees and consumers. In 2013, we've seen good progress, particularly on targets within our direct control.'

Polman has outlined plans to step up its work to tackle several major global sustainability challenges, including: helping to combat climate change by working to eliminate deforestation, which accounts for up to 15 percent of global greenhouse gas emissions; improving food security by championing sustainable agriculture, and improving the livelihoods of smallholder farmers who produce 80 percent of the food in Asia and sub-Saharan Africa; and improving health and well-being by helping more than a billion people gain access to safe drinking water, proper sanitation and good hygiene habits.

In the area of social compliance, Unilever has also confirmed that the Sustainable Living Plan has been expanded with a more substantive enhancing livelihoods program focusing on fairness in the workplace, opportunities for women and developing inclusive business.

Polman says: 'We're making good progress in reshaping our business for sustainable, equitable growth. But we need to do more. We have always recognised the bigger role that businesses need to play, and now is the moment for Unilever to step up and expand efforts in key areas, driving transformational change where we know we can make the biggest impact. In this way we will leverage our scale and work collaboratively in partnership with others to reach a tipping point in areas that will make a significant difference.'



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HEIDELBERG'S D-106 Pro CSB rotary die-cutter for paper and film labels

Labels at the cutting edge

BARRY Hunt examines some production trends with sheeted labels

Little seems to change in the world of sheet-fed labels, in particular the wet glue type. Despite strong competition from other labeling technologies, these classic labels consistently account for roughly one-third of all label usage in the developed markets, rather more so in some emerging markets. Their relatively low cost and flexibility make them a popular choice for markets with high-volume runs, such as canned foods and bottled mineral water, beer, wine and spirits. While reel-fed flexo and gravure presses handle the extra-long runs, offset printing of sheeted paper and film labels remains competitive and adaptable to changing market conditions.

Looking at the basics, paper wet glue labels are printed on single or double-sided, coated and uncoated grades. They range from uncoated white, bleached kraft paper in a range of 60-100 g/m2, to specialized laminates with aluminum foil, or bright metalized finishes for printing with metallic inks. Some wine label grades have distinctive linen and brush texture surfaces. Label papers must combine good tensile strength with an appropriate stiffness level, while withstanding the demanding conditions associated with fast-running filling, labeling and conveying lines.

Conventional square-cut printed labels that wrap around cans, or are used for front and back labels on bottles, are guillotined on automated cutters into stacks for banding and wrapping. Eventually the unwrapped stacks are placed in the hopper/magazine on the filling and labeling line. An aqueous adhesive is coated on the reverse side at the point of application.

Whatever the production method, printed labels that are oval, round or shaped, as well as neck labels and tamper-evident seals, are traditionally ram punched off-line using automated punching machines and hardened steel dies. Many printers of sheeted paper and film labels use flatbed cutters, while a few have installed off-line rotary die-cutters. An example is Heidelberg's Dymatrix 106 rotary die-cutter, based on the Speedmaster XL 106, which has a throughput of up to 10,000 sheets per hour, double that of a flatbed cutter.

The market for offset-printed cut-and-stack film labels is well established, although growth levels remain fairly static at around three percent of total volumes in developed markets. Wrap-around film labels made from oriented polypropylene (OPP) account for most usage. Transparent grades of this high-yield polymer offer excellent clarity, which makes OPP an ideal 'no-label look' substrate that gives a 360-degree decoration. Labeling carbonated beverages in parallel-sided PET bottles is one growth market since the film wrap-around allows for expansion of the bottle when the carbonated liquid expands in transit, or when subjected to temperature changes.

Another variant of sheeted, offset-printed film labels are those used for decorating blow-molded plastic bottles and injection-molded containers, cups and tubes. In-mold cut labels (IML) fed from hoppers becomes part of the packaging in a single operation. Again, a favored substrate is OPP, or the biaxially-oriented (BOPP) variant, with synthetic paper types also in wide use. As with cut-and-stack labels, IML substrates are normally supplied direct from the mills in reels since many printers equip their presses with inline sheeters, such as Heidelberg's CutStar, or use offline sheeters. This method is more economical than buying reams of plastic film sheets or metallized foils through merchants.

PRODUCTION TECHNOLOGY

Heidelberg, Komori, KBA and Manroland dominate the sheet-fed label press market. Sheet sizes are either B1 format (700cm x 100cm) or B2 format (50cm x 700cm); 28 x 39 inches and 19.5 x 28 inches respectively. Configurations usually include eight or nine print units, one or two coating units, and extended, multi-pile deliveries. Print speeds have edged up from 10,000 to 12,000 sheets per hour.

Heidelberg's Speedmaster XL 75 Anicolor, which recently went into production, typifies the versatility and productivity of modern offset-litho presses. The eight-color, medium-format press includes a modified version of the company's zoneless short inking unit. It inks up sheets extremely quickly and consistently, giving saleable print from around the 10th copy; some 10 times faster than with conventional inking systems. The top-rated speed is 15,000 sheets/hour. Applied to wet glue labeling it could radically change print order volumes, perhaps augmenting a form of digital printing for variable data.

Developed from commercial sheet-fed offset printing, the JDF (Job Definition Format) technical standard for label production is widely used to facilitate cross-vendor digital workflows, managed by the CIP4 standard. As an XML format, JDF files, or messages, help to automate the whole production circle, including color management procedures. Links with management information systems allow operators to import job and prepress data during the set-up process, as well as settings for repeat jobs. Real-time press and operating data is returned to the MIS as a JMF (Job Messaging Format) file for precise job costings.

Computer-to-plate techniques have reduced prepress times and improved print quality, while step-and-repeat procedures allow operators to gang-up different label formats and multiple jobs on the same sheet. With today's emphasis on fast changeovers, modern offset presses incorporate automatic plate changers, automatic blanket washing and remote inking systems. The aluminum-based plates are also considerably cheaper compared with photopolymer flexo plates.

During the run, inline coating units provide various matte, glossy and metallic surface finishes for decorative and tactile effects, while offering surface protection. Flexo pre-coater units apply UV-cured metallic or opaque white effects on stock before printing. This avoids the extra cost of buying-in specialist papers and boards, while creating the potential for new substrates. Laying down an opaque white coat also improves the legibility of bar codes and provides a base for color control bars.

Cold foiling to augment offline hot foil embossing is used extensively. Modules are fitted on the first two offset units: one uses a conventional offset plate to print an adhesive onto the sheet in the required design. Blanket and impression cylinders in the second unit press the cold foil onto the adhesive to create the metallic effect. The remaining unused foil is rewound. Subsequent units can print inks onto the transferred foil's surface to create unlimited metallic color combinations.

Many label presses are configured with hot air and infra-red drying units, as well as inter-deck or end-of-press UV curing. Here, a greater emphasis on energy saving has resulted in lamp outputs of 160 W/cm or so, rather than the 250 W/cm in former years. Extended lamp life, and computer-generated reflector profiles have also improved UV efficiencies.

A new generation of low energy LE/HUV lamps doped with iron halides - which shift the spectral output to higher wavelengths - holds out the promise of reduced energy input and reduced heat output without generating ozone. Specialist inks are required, and Flint Group recently launched its XCura range to target this 290-460nm application.

As for post-press finishing, there is a wide choice of stand-alone machines or automated lines to produce banded and wrapped labels ready for placing in the hoppers or magazines of the integrated packaging lines. For example,



HEIDELBERG'S FoilStar cold foiling finishing process

Polar-Mohr's LabelSystem SC-21 has an output of up to 3,185 bundles/hour for square-cut labels. The system pushes and aligns pre-cut strips into an Autocut 115 cutting machine, after which the labels move to a BM-105 multi-station bander. For die-cut labels, the Polar Autocut 25 takes precut strips and cuts them into label stacks. They are pushed to either a DC-11 or DC-11plus die cutter for producing die-cut labels at rates of 960 and 1,440 bundles/hour respectively. An OptiChange menu-driven setup allows job changes in 15 minutes. Operators can also prepare the knife and punching tool outside the machine while a job is running. Die-cut stacks are automatically pushed to a single-station bander.

THE RISE OF ALTERNATIVE TECHNOLOGIES

The rise of shorter print runs has encouraged an increased development of sheet-fed inkjet printing, either stand-alone or integrated within digital workflows. As described elsewhere in



A can is a can. It only becomes an unmistakable item once it has a label on it.

"Our customers appreciate particularly the consistently high quality of the labels as well as our flexibility in the order processing."

Wilhelm Gerstberger, Head of Postpress Engelhardt Etikett



POLAR LabelSystems for cut and die-cut labels are the technological answer to demanding challenges in the prospering label market.

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this issue, Heidelberg and Fujifilm are jointly developing B1 and B2 format sheet-fed inkjet presses to extend an existing usage for short-run folded cartons. Komori and Screen have their own projects for commercial and packaging applications. It seems feasible such presses could also produce wet glue, cut-and-stack and wrap-around labels for short-run applications, or for overprinting variable data on pre-printed sheets.

Regardless of the method of production, sheeted labels are facing strong challenges from alternative technologies. As widely known, pressure-sensitive labels supported by fast automatic rotary applicators have displaced wet glue labels in several key segments. This is highly evident among wineries in Australia, Chile, South Africa and New Zealand. Shippers of bulk branded wines for supermarkets, where the same wine may appear under different labels for regional markets, are also high volume users of PS labels.

In the mineral water and soft drink segments, film or paper wrap-around labels and film sleeves have also replaced wet glue labels. To blur the picture, some integrated filling lines include modular PS and wet glue applicators, such as Krones' APS3/4 PS units. As a result, many premium beers and some spirits now carry clear-on-clear filmic labels.

The growth of direct printing of containers, especially aluminum beverage cans, obviously effects all label sectors. An even stronger threat to label usage is the emergence of full-color, direct-to-shape printing of cans, bottles, cylindrical shapes and other curved surfaces using UV-cured inkjet printing. Heidelberg with Krones, plus KHS, Sacmi, Till GmbH and KBA-Kammann are already actively involved with production systems.

As a major OEM partner, Xaar says its existing 1001 and the new-generation 1002 series of piezo-electric printheads are technically ideal for this non-contact decorating process. New machine designs with high-speed, direct printing capabilities can be integrated within production-speed bottling and packaging conversions. For example, the new modular Till SmartPrint machines can handle volumes from 10 up to 600 bottles or cans per minute (equivalent to 36,000 per hour).

How these alternative technologies will effect the conventional production of wet glue, cut-and-stack and sheeted IML labels is hard to forecast. But if you thought nothing much happens in the sheeted label market, then think again.



POLAR'S LabelSystem DC-11 die cutter

SHEETED FILM DEVELOPMENTS

Taghleef Industries (Ti) says its OPP cut-and-stack films offer superior wet strength performance compared with paper alternatives. They range from high yield, white-voided to solid white or even transparent films for a 'no-label' look. A variation of cut-and-stack labels are the spot-patch substrates, also with an OPP core. Ti says its OPP-based IML films offer the essential properties of stiffness, optimal antistatic characteristics, and surfaces that allow seamless sheet separation for optimum printing, finishing and labeling efficiency. All films are manufactured to prevent material distortion during both the printing and drying processes.

Treofan's clear and glossy grades use water-based cold glues, rather than hot melts, to facilitate their use on conventional bottling lines. The nominal thickness is now 57 micron. For more general sheeted labels, the 70-micron ELR grade is a white-voided OPP film treated on both sides.

Other developments include Yupo Europe's IML substrate with a holographic surface. Developed with a partner company in Europe, it uses LBR 80 as its base material to offer over 60 different holographic designs. Converters can print the material in sheets and rolls, without requiring large quantities for production. The company keeps two or three different designs in stock for trials and small orders. A4 samples, printed samples and injection molded samples are available for evaluation.

Arjobex's range of synthetic papers include Polyart Wet Glue with a waterabsorbent coating for quick drying. Using conventional paper label adhesives, the substrate is said to emulate premium matt-coated papers, while offering a wrinkle-free, water-resistant, high-quality appearance on glass and plastic containers. Labeling applications include household detergents, chemicals, and food and beverage containers. Being made from coated cavitated HDPE films, Polyart labels are recyclable in a polyethylene waste stream.

Finishing digital sheets and films

NARROW WEB CONVERTERS are increasingly looking at digital converting of folding cartons and flexibles. Danielle Jerschefske considers some of the options

Label converters are increasingly looking at expanding their service offering into flexible packaging and folding cartons using the new generation of wider digital presses. In combination with a new generation of finishing machines specially adapted for short runs, this potentially gives converters the ability to bypass the traditional 'heavy metal' analogue systems installed by traditional carton and flexible packaging houses. Note that 'flexible packaging' may also include unsupported film labels including shrink, wraparound and in-mold.

So what options are available on the finishing side? For flexible packaging and folding carton converting, AB Graphic has worked closely with press manufacturer, Edale to develop the Digicon 3000, a 30-inch (762 mm) wide finishing line for digitally pre-printed label and flexible packaging materials. The system is designed for short runs and can be supplied to complement any 30-inch wide digital press installation. The Digicon 3000 offers a choice of semi-rotary and flatbed finishing, and can be retro-fitted to existing Digicon series 2 machines to enable finishing through a wide range of converting options for PSA labels as well as laminating and decorating for flexible packaging. Kama's DC 58 flatbed die-cutter has a sheet format of 580 x 400 mm for cutting B3 sheets and its DC 76 die cutter (760 x 600mm format) completes the workflow for B2 size machines. The DC die cutters provide a flexible solution for finishing, including cutting, creasing, perforating, kiss-cutting, cold embossing and Braille.

The Bograma Rotary Die-Cutter was developed for single sheet folded box processing and for thin, folded products using flexible dies in formats between A4 and a maximum sheet size of 550 x 750 mm. The machine can punch, kiss-cut, perforate, crease and de-boss, on one or multiple-up impositions. A maximum product thickness of 0.5 mm can be punched. The die-cutter automatically discharges the section grids and breaks out the inner cuts to optimize production.

Generally, the maximum production capacity is 12,000 cycles per hour. The system is compatible with Xeikon's folding carton suite and was shown operating inline at the Labelexpo package printing workshop at Labelexpo Europe.

Berkeley Machinery has the Autoflex SRD-S430 and SRD-S530 wider web range of multi-functional finishing systems with models up to 1650mm for folding carton applications.

The Comexi L20000 is a solventless laminator now under development and designed specifically to work with the HP Indigo 20000 press aimed at flexible packaging and film label printing. The L20000 will be commercially available early 2015.

Delta Industrial offers several options for packaging and pouch finishing, with applications including hot and cold seal machines and part placement systems. The technology is fully modular and is available for both standalone and in-line converting operations. The modular Delta Mod-Tech 20-inch converting system is targeted at the finishing of wider digital webs and larger parts. Modules include a pneumatic splice table, folder, adjustable score rolls, bullnose island placement and insertable blade sheeter.

Emmendinger Maschinenbau launched its newly designed DS 520 high speed die-cutting and embossing machine at interpack 2014. The DS520 processes unprinted or printed aluminium or plastic foils, as well as paper, which can be unwound and cut into smaller shapes. These shapes can be used as covers, sealing lids, lids, labels, in-mold labels, ice cream cones or bottle neck labels for applications in the packaging, food and beverage industries. They can be embossed, perforated, formed, domed or pre-formed. The modular system will process web widths from 300 up to 520 mm. Modules include a print mark sensor with teach-in function, counting and stack marking systems.



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TLMI talks viability, applauds winners

DANIELLE Jerschefske reports on TLMI's annual Converter Meeting

This year's 2014 TLMI winter converter event met on California's coast. TLMI hosted two outstanding businesscoaching experts who shared their insights on remaining viable in business. The association also celebrated the winners of its Eugene Singer Award for Management Excellence as well as its 2013 World Label Award winners.

DEBATE TO SELL

Terri Sjodin is the principal and founder of Sjodin Communications. She specializes in advancing presentation skills and is the author of the national bestselling book Small Message, Big Impact listed on the New York Times and Wall Street Journal bestseller lists.

Sjodin encouraged TLMI converter members to utilize 'debate' strategies in a selling environment. 'Most presentations are far too informative rather than persuasive. Avoid crazy data dumps. When you do this, people can pick out all of the information you've shared and use it to conduct business somewhere else.'

Sjodin provided a few guidelines for enhancing credibility during a presentation:

- In a pitch, a compelling opening argument formulated for debate situations can close deals and make for more stable relationships
- Promote learning, education and technical support
- Be clear and concise. In this way the audience is able to communicate your competitive edge to their peers without confusion
- Provide choice without duress. If you can prove how you'll support the majority of their needs, then you win the deal
- Inspire them to take action as a result of the content. Do not delay in follow-up. The best time to seek a decision is right after your presentation

TLMI 2013 WORLD LABEL AWARD WINNERS

McDowell Label & Screen Printing (4) Collotype Labels (3) Smyth Companies/Dow Industries (1) Along with the case, understand the personal lives of your clients to relate to them a bit more. What you don't know really can hurt you

Sjodin concluded, 'Freshen up your message and think about all of the parties that may effectively be reached with a planned out, persuasive case. Earn the opportunity to give the decision maker your full presentation. Knowledgeable and fresh is lethal in a business pitch. It gives them no other choice but to choose you.'

CULTURE FOR TALENT

Cameron Herold is best known as the driving force behind 1-800-GOT-JUNK?'s growth from two USD to 106 million USD in revenue in six years. Now, as the founder of BackPocket COO, Herold leverages his experience in various executive leadership roles to help businesses navigate growth, develop management, and build distinctive company cultures.

Herold discussed the importance of nurturing unique workplace cultures to attract top talent. He explained, 'Culture doesn't happen by accident, it happens on purpose. A powerful culture should feel slightly more than a business, and slightly less than a religion.'

Herold provided advice for nurturing an enterprise culture that delivers success:

- Describe in vivid detail what your company looks like. Communicate this to your people so they're able to share the vision
- Your people will make your plan happen once you align them with your vision. That's what they are there for
- The vision and details must push some people away. You only want the customers, employees and suppliers that align with the business



DAVE MCDOWELL TLMI Chairman and Sandy Petersen of Digital Label Solutions, a Eugene Singer Award winner

- Descriptive details should be written out for three years. Reverse engineer the plan to make it come true. Review and analyze every quarter and identify objectives to modify
- External communications are critical. Make your website authentic. Inform and support customers in a user-friendly way. Deliver what will most benefit them
- Written communication is killing the culture within organizations. Make the space and time for meaningful one-on-one and small group face-to-face discussions. This makes for clearer messaging and tighter collaboration

Herold said, 'Caring about employees is knowing about their personal dreams and goals. If you help them manage their dreams, they'll help you manage your business.'

EUGENE SINGER AWARD FOR MANAGEMENT EXCELLENCE

The Eugene Singer Award for Management Excellence is measured and defined by an established set of growth and profitability ratios through participation in the TLMI Management Ratio Study. Winners are selected amongst like-sized companies.

The 2013 winners are:

- Small Columbine Label Company, Centennial, Colorado
- **Mid-range** Digital Label Solutions, Yorba Linda, California
- Medium The Label Printers, Aurora, Illinois
- Large Consolidated Label, Sanford, Florida



DAVE MCDOWELL TLMI Chairman and Lori Campbell of The Label Printers, a Eugene Singer Award winner

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el GRAFOTRONIC sees digital as a big market for growth, and is keen to work with multiple supplie

Grafotronic's grand design

FINISHING SPECIALIST Grafotronic has big plans for the future, as David Pittman found out on a visit to its production facility in Poland

2014 marks the 10th anniversary of Grafotronic, and the company recently hosted a big party to celebrate this milestone. This saw partners, customers and friends of the company visit its facility outside the Polish capital Warsaw.

The roots of Grafotronic can be traced back to the early 1970s, when Per-Åke Wasberger founded Wasberger in Sweden to supply machinery to the narrow web industry. In 2004, the Grafotronic brand was established in partnership with Lesko Engineering in Poland, and now occupies a modern manufacturing facility just outside Warsaw. This facility includes state-of-the-art grinding, component fabrication and other production tools.

The latest investment is a WaterJet that is being used to cut out steel components for the different machines in the Grafotronic range. Almost all machines are manufactured in-house.

In the last decade, Grafotronic has secured more than 500 installations worldwide, and vice-president Mattias Malmqvist has big plans for Grafotronic's future – including keeping a close eye on emerging narrow web technologies such as inkjet, and developing systems to suit.

Already an industry veteran at the age of 37, Malmqvist's has represented some of the most famous narrow web brands in the Scandinavian territories. In his current role he will focus on developing new markets, particularly South East Asia and the Far East, along with plans to establish a direct presence in the US. Grafotronic is also working to establish a presence in Romania to act as an additional manufacturing facility handling the production of off-the-shelf products.

RECORD ORDER BOOK

Grafotronic's order book for the first quarter of 2014 stands at nearly 50 units, a company record. This includes work on OEM components and cutting-edge systems for demanding markets such as pharmaceuticals.

India is proving a very successful market. A second unit has been shipped to Ajanta Packaging's recently established operation in Thailand, while a new model with re-inspection capabilities has been developed and tested for Webtech. This system includes a buffer to allow the web to be pulled back should errors be detected. Defective labels can be dealt with and the web re-inspected without affecting the movement of the in-feed and slitting and rewinding operations.

NEW EQUIPMENT

New equipment includes the 13in digital converting line (DCL) and the 13in compact finishing line (CF) unit. The DCL, like all Grafotronic machines, is modular, making it simple to integrate additional functionality at a later date. It offers semi-rotary/ rotary finishing of pre-printed labels, and includes varnishing, laminating, hot-foil and cold-foil stamping, die-cutting and slitting. The CF is a more compact entry-level machine but also modular should the customer need to add capabilities.

Modules include a large unwind and a semi-rotary die-cutting system with a rotary mode for handling pre-printed labels at 180m/min or blank labels at speeds up to 220m/min. Printing modules are also available for overprinting, including flexo stations with combined IR/hot air dryers and/or UV dryers. For rewind, a servo-driven unit with single or dual rewind spindles for large rolls is available, as is a semi-turret rewinder. A heavy-duty sheeter with delivery table and a fully automatic turret is also offered.

One of the first Grafotronic DCL units was successfully installed at BEAB Boxon in Borås, Sweden, where it is being used for the finishing of both digitally and conventionally printed labels. The unit at BEAB Boxon is equipped with a printing unit, the new combined servo semi-rotary and rotary die-cutting system and a heavy-duty sheeting unit.

'What is happening in digital is very interesting,' says Malmqvist, 'but as a finishing equipment supplier we want to be agnostic and not necessarily tie ourselves in too closely with one type of digital printing process or another, although we are very conscious of all the research and development that is taking place in the field of inkjet.'

Grafotronic reported a 40 percent growth in sales during 2013, and Malmqvist looks justified in feeling confident about the company's future.



ONE of the three Nuova Gidue presses at the facility used for online value addition



ONE of the two Gallus EM 280s at the Vasai plant

Skanem Interlabels expands aggressively

LEADING Indian converter Interlabels is now a wholly-owned subsidiary of the Skanem Group and is greatly enhancing the group's reach in the sub-Continent. Aakriti Agarwal reports

Skanem Interlabels is undergoing an impressive expansion in its facilities and capabilities as it fits into the wider global Skanem group.

The company opened its third plant in India in the historic city of Kolkata in February 2014. Spread across an area of 20,000 sq. ft., the factory houses a Nuova Gidue press that has been shifted from the company's Vasai plant in Maharashtra. A fully loaded 10-color Nilpeter FA-4 was installed in its Baddi unit in October 2013 and another Nilpeter FA-4 is installed in Vasai. Both these Nilpeter presses have been imported from Europe. The company also has a small office in Delhi where it does special barcode variable data printing.

HOW IT BEGAN

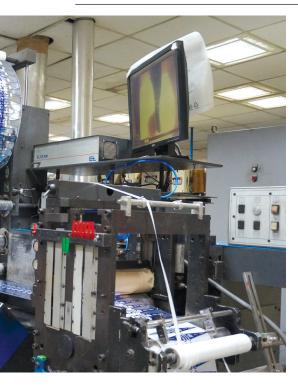
Interlabels (now Skanem Interlabels) was started in 1983, by Bhavin Kothari with a small investment in unused second hand equipment – a flat-bed 2-color Taiwanese machine. It was the time when self adhesive was not popular in the Indian industry, except in sticker applications for cartons and stationery. An opportunity knocked on the door when Reliance Industries was looking for basic self-adhesive labels in double color for its cartons. Skanem Interlabels could do this job with the existing machine. It was a turning point for the company. Gautam Kothari, marketing director, Skanem Interlabels, says, 'The business picked up, following which we bought a flat-bed Japanese press in 1987. That's also the time I joined the business and focussed only on self-adhesive labels.'

With time the industry evolved and in the late 1980's, early 1990's a lot of plastics came into packaging which changed the business. Eventually, Skanem Interlabels got three letterpress

machines from Kopak. 'It was easier to use letterpress machines for high end results. Many converters moved to flexo and had a tough time matching our quality,' says Kothari. With equipment from Kopak, the company shifted its focus to more sophisticated labels used in cosmetics packaging.

Gradually, flexo evolved and Interabels adapted the technology with a Gallus press. Skanem Interlabels has tied up with a local CtP processing house that manages its plate making. It is now evaluating the purchase of pre-press equipment from either Esko-Dupont or Kodak for the Mumbai plant. 'Processing plates is a business in itself. With increasing volumes, we will have to move pre-press in-house,' says Kothari.

In the 1990's Skanem Interlabels was one of the most prominent names amongst label stock manufacturers in India with a plant in Ahmedabad. 'Back then, it was difficult to get good quality raw material in India. Production quantity was heavily dependent on how much readily available good quality raw material could be procured from the market. We saw a huge opportunity there and started manufacturing it. We became suppliers to most label printers in Western India,' he says. By the late 1990's there were many players in the segment and the entry of some big names such as Avery Dennison in India made it a highly competitive market. 'Now printers had the option to buy label stock from multiple players, so why buy it from a competitor? We saw more sense in printing labels than making label stock so we sold our facility in Ahmedabad. In order to give a complete solution to our customers, we retained one hot melt coater which is used for speciality treatments on label stock for speciality jobs,' he says.





AN Omega press used for making blank labels is run at 100 meters a minute.

"In order to give a complete solution to our customers, we retained one hot melt coater which is used for speciality treatments on label stock for speciality jobs"

Meanwhile, Interlabels also worked towards shifting its customers to roll form labeling. A lot of larger companies, even after shifting from glass to plastics, employed a lot of labor in the packaging division for applying labels manually. 'We saw automation as an opportunity and in 2006, developed our first automated labeling application machine for roll form labels for the local market,' says Kothari.

MACHINE MANUFACTURING

Interlabels, and now Skanem Interlabels, has sold over 1,000 labeling machines. The last fiscal witnessed a growth of 25 percent in this division with a sale of 400 machines. This indicates a rapid growth in automation by label end users. The company makes all kinds of self-adhesive label application machines, including wraparound, two sided, top, tube labeling machines and print and apply machines. The clients of the division include Unilever, Marico, ITC, Cipla, Johnson, LG, Dupont and Reckitt among others. Skanem Interlabels is exporting these machines to the Middle East and Africa. It is also looking at exporting these machines to European markets. Kothari says, 'We match European standards with this product and will be very competitive. After our joint venture with Skanem, it would help us penetrate better as we are the India subsidiary. I also feel that the 'Made in India' tag is getting more acceptance. In the Middle East, we have replaced a lot of European applicators with these applicators.'

The equipment is delivered within four to six weeks and the cost depends on the level of sophistication of the machine. 'A basic machine would start at Rs 3,00,000 (5,000 USD) or Rs 4,00,000 (6,600 USD) and it could go up to Rs 20,00,000 (33,000 USD) to Rs 25,00,000 (42,000 USD) for highly automated and advanced equipment,' says Kothari. The division thrives on customization of these machines. The company started by importing these machines from Europe in 2000 and distributing them in India. As they got expensive, Skanem Interlabels started importing parts of the machine to India and eventually began manufacturing in-house.

SKANEM INTERLABELS AFRICA

Interlabels tied up with Rodwell Press of Africa in 2005. 'I see a lot of scope in Africa. Spread across an area of 30,000 sq. ft. our plant in Nairobi is growing at a rate of 15 to 20 percent year-on-year,' says Gautam Kothari. Kopak was the first machine installed in the plant in 2005 followed by a Nilpeter FB-3 in 2009. It was the company's first Nilpeter purchase. The most recent investment in Africa is a Nuova Gidue press bought in 2013.

FROM JOINT VENTURE TO TAKING OVER

It was in 2012 that an international player, Skanem Group, showed interest in investing in the developing Indian economy and acquired a 51 percent stake in Interlabels. 'I had met Skanem management at FINAT meetings. They were looking at investing in this part of the world. We met the owners and got along well. We, at Interlabels, were sure that a merger with an experienced and well connected company would bring a lot of value addition to the business,' says Kothari.

Large label buyers across the world mostly look at



LABEL stock neatly arranged at the plant

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7 color HP Indigo WS4500 digital press at the Vasai unit of Interlabels

established regional and global companies for business opportunities thus enabling them to implement the same artwork on their products while maintaining quality.

Elaborating on the venture, Kothari explains, 'This is a very capital sensitive industry. To have larger plants and an increased footprint, while continuing to be leaders in the industry, requires a lot of investment. Much larger and financially stronger partners such as Skanem Group facilitate growth.' Since the tie-up with Skanem, new technologies and innovations are discussed and better systems are set-up in each plant. After the final merger, Skanem has a total of 14 plants across the world. Skanem Interlabels in India, however, is manufacturing only for the domestic market and exporting very little to Africa.

Earlier this year Skanem acquired the balance of its stakeholding in Skanem Interlabels thus making it a 100 percent subsidy of Skanem SA. Although the ownership has changed, there is no change in the management.

The three divisions at Skanem Interlabels include printing, machine manufacturing and barcoding. Skanem was not interested in getting into barcoding in India, while Skanem Interlabels provides bar coding software solutions to various companies. So, at the time of joint venture, it formed a new company, Intercode Solutions Pvt. Ltd.

THE INDIAN LABEL PRINTING INDUSTRY

Looking at changing label industry technologies, Kothari says, 'Digital had a lot of challenges in India till now. It cannot replace flexo in the short to mid-term, but I see it becoming dominant in the next three to five years.'

Explaining the reason for it being successful in the west, he says, 'It is

easier to break even on a digital press with short runs in the west because the hourly overheads are very high and raw material component to selling price is much lower.' Having said that he agrees that the overheads in India are far lower than in the West and the job runs are getting shorter too, but the market is not evolved enough for personalized marketing. The company houses one 7-color HP Indigo WS4500 press at its Vasai plant that operates for one or two shifts a day. Kothari also sees inkjet as one of the promising technologies.

Estimating the size of the Indian industry using pressure sensitive labels, Kothari says, 'Various industries such as personal care, home care, pharma, petroleum, edible oils, liquor amongst others are using self-adhesive labels. So according to my observation, 30-35 percent of Indian packaging industry has shifted to pressure sensitive labels.' Commenting on the projected growth of the labels industry in India, Kothari says, 'Penetration is low and the per capita consumption is less, so I see a lot of industries getting into self-adhesive. The self-adhesive segment should grow at 15-20 percent.'

The second hand machinery market is huge in India because many companies cannot afford to buy new equipment. To go for it or not depends on the condition of the press. 'Second hand equipment should be bought directly from a manufacturer, so it's at least a refurbished piece. It is also important to ensure support from the machine manufacturer. They will mostly try to sell a new press, but it is their responsibility to service their press anywhere in the world,' he says.

GOING GREEN

Skanem Interlabels manages the production waste it creates in its plants. 'The market is getting tougher so we have been controlling a lot of process waste within the plant by focusing on downtime, faster changes, reducing the consumption of electricity, using optimum quantities and paper size to get better prices. A lot of our customers have already started asking about sustainability and recycling. We have started looking at this in a serious manner and are evaluating how to reduce our carbon footprint by using thinner films and recycling waste,' says Kothari. The company is talking to its suppliers and learning from best practices followed at Skanem plants across the world. Kothari, however, feels that linerless labels will take some time yet to hit the Indian market. 'They are looking at sustainability but not at economy. I am not sure how much it will save in terms of dollars and cents,' he concludes.



GAUTAM Kothari, managing director of the company at the Vasai plant near Mumbai



DIGITAL LABEL PRINTING TROPHIES AWARDED IN PARIS

MIKE FAIRLEY reports on an influential digital award ceremony, as the quality of digital print continues to increase

The annual French digital Label trophy competition, organized by the French magazine for labels and packaging, Etiq & Pack, took place in the Hotel Intercontinental in Paris on March 19. Part of the annual event – The Digital Label Forum the competition enabled a distinguished panel of judges to review high quality digitally printed labels produced on the latest digital toner and inkjet presses. The judging panel, including John

Penhallow, Wolfgang Klos-Geiger, Mike Fairley, Jean Poncet and Christophe Bosschaert were impressed by the level of entries and felt that the quality and performance of the best inkjet entries todav could well stand comparison with what the flexo process has to offer. Even in the year since the competition was previously held it was evident that digital printing continues to advance in speed,

performance and quality of printed results.

Also regarded as outstanding were some of the digitally printed entries that had been finished using laser die cutting. Used with the right designs and shapes the judges regarded laser technology as able to provide exciting new shapes and opportunities that would be attractive to brand owners and laser users and ideally also add-value to the label production process.

TROPHY WINNERS IN THE VARIOUS CATEGORIES WERE AS FOLLOWS:

1. Food: Presented to Techmay Etiquetage for Yaourt Vanille labels and seven other flavours – printed for Domaine de Grignon on a Durst Tau 330 UV inkjet label press.

2. International : Presented to SPG Prints for Oil

DMO Ultra 400 labels printed for Rehkal on a SPGPrints DSI digital UV inkjet label press.

3. Non-food goods: Presented to QRT for Natural Paints labels printed for Laboratoires Natura on a Domino N610i inkjet label press

4. Best Variable Data use: Presented to MICHEL-LATA for Cru Bourgeois labels for BordeauxWines and printed on a HP4050 electrophotographic digital press.

5. Beauty: Presented to LABEL G2 for Cream Edenens labels for Edenens and printed on an Epson SurePress L4033

6. Wine: Presented to LABEL'OR for Nell Méthode traditionnelle labels for Domaine du Ry d'Argent and printed on a Xeikon dry toner press.



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VINSAK Omega SR 410 label inspection slitter rewinder on display at Labelexpo Europe 2013

Vinsak strengthens 'Made in India' brand

FOLLOWING SIGNATURE of a deal to manufacture ABG equipment under license in India, Vinsak is finding a ready market for its locally built machine systems. Aakriti Agarwal reports

Vinsak, a division of Creed Engineers, has started manufacturing label finishing equipment from AB Graphics under a license agreement at its new facility in Mumbai. Vinsak has been a distributor of the European manufacturer for the last 18 years in India. 'We are manufacturing equipment such as slitter rewinders, that have a larger domestic market, and will soon expand our portfolio with the launch of up to five new



VINSAK LSR 330, slitter rewinder, from the stable of the European manufacturer ABG is being manufactured in the Mumbai facility of Vinsak

products this year under the same agreement,' says Ranesh Bajaj, director, Creed Engineers. Among the five products will be a core cutter and slitter for short runs. Production will continue at the new multi-level plant spread across an area of 10,000 sq. ft to which the company will soon add another 10,000 sq. ft. of built up space.

The Vinsak LSR 330 slitter rewinder from the stable of the European manufacturer is being manufactured in the Mumbai facility of Vinsak. 'We have got repeat orders of this equipment and are hoping to sell 25 to 30 machines in the current fiscal,' says Bajaj. The plant started in October 2013 and the company has delivered five machines – all exported to Africa. Another LSR 330 is expected to be installed in Mumbai soon. Bajaj says that the company got all its leads in Africa from Labelexpo Europe held in September 2013. With a maximum speed of 300 m/ min, this equipment comes with optional attachments such as missing label detection, 100 percent web inspection camera system and rotary die cutting stations amongst other features.

The design includes a quick makeready rotary-scissor slitting unit with knife separation and lateral adjustment. A color touch screen operator interface enables quick job setups, control of

"Vinsak has also delivered two LVPI 250 variable data printing and inspection systems to India, and is shipping a couple more in the next two months"



THE Vinsak stand at Labelexpo Europe 2013

various counting facilities, automatic web advance, taper tension control and end of roll notification. The price of the equipment ranges between 25,000 USD and 45,000 USD. Though various components of the machine are imported, the company has succeeded in reducing overheads by getting labor at a more competitive cost and focusing on volume production.

Vinsak has also delivered two LVPI 250 variable data printing and inspection systems to India, and is shipping a couple more in the next two months. Priced at approximately 150,000 USD, it is a dedicated press for printing personalized security labels with variable data printing, inspection systems and slitting. 'This product is also made in India and has a global market. We are confident of generating good sales across Europe and other developed markets,' says Bajaj. The

components of this press are also imported, but the final assembling and testing are done in India.

The company is betting big on the rising counterfeit market by providing solutions to combat fake products, and generates 30 percent of its turnover from this division. Vinsak technology is mostly used for security printing applications and enables the addition of special features such as embedding hidden images within the design, without spoiling the aesthetics of the label.

Vinsak also has a tie-up with a French company from where it is importing 3,600 varieties of ink to combat counterfeit products. Bajaj says, 'Label printers need to make initial investments, but eventually they will add value to the brands and get a better ROI on the end product. It is, however, important to understand customer needs, identify the problem and give a relevant solution. We

can make it difficult for the counterfeiter by offering something new and easily verifiable each time.' Currently, labels with a range of security features are used in the automobile, cosmetics and banking industries. They are also widely used for events catering to huge crowds.

At Labelxpo India, Vinsak plans to showcase AB Graphics' Digicon Series 2 digital convertor, the second version of LSR 330 and LVPI presses. The company has sold a total of 12 VIS inkjet systems globally in 2013-14.

For export sales, Vinsak has offices in Sri Lanka, the Middle East, and East Africa.

Bajaj has been restructuring and reorganizing the company for the last two years and he concludes, 'It has started to pay off now. We have decided not to become distributors of any other company.'

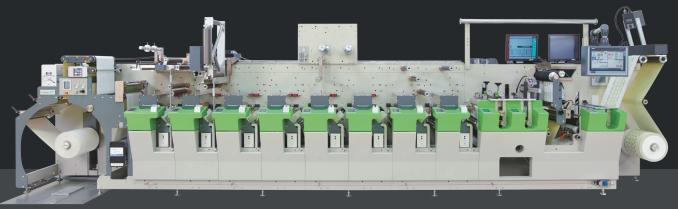


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THE newly installed 10-color Mark Andy 2200

A GEW E2C lamp on Mark Andy 2200 press



the floor of Suzhou Advanced Printing

Technology investment boosts Chinese converter

BY installing the latest GEW UV curing system, Suzhou Advanced Printing has reduced energy consumption and accelerated its sustainable development program. Kevin Liu reports

Suzhou Advanced Printing ('Suzhou Advanced') is one of the fastest growing converters in the Chinese label printing industry.

From the establishment of its factory in 2001, the company has grown steadily. In 2008, the first Mark Andy flexo press was installed, with on average one new press added each year after that. Today Suzhou Advanced has six Mark Andy flexo presses and annual sales of RMB 150million Yuan (24.5 million US dollars). This makes the company one of the top professional self-adhesive label converters in East China, and brings them a powerful competitive edge in such fields as household chemicals, pharmacy and foods, with well-known customers from both inside China and abroad.

Besides the advantage of its location, a key reason for the success of Suzhou Advanced is a focus on technology and innovation. Zhong Xiaochun is vice general manager and chief engineer at Suzhou Advanced. He says that what differentiates the top converters in China today is not so much the equipment, which is widely available, but the level of management expertise.

Reducing energy consumption is a key focus for Suzhou Advanced, which uses UV curing on all its flexo presses.

'In fact, we have been searching for new UV curing technology for a few years,' says Zhong Xiaochun, 'At the time of the installation of the first Mark Andy press, we specified a GEW VCP UV curing system. At that time, we made a comparison between this and the domestically supplied UV lamps we used before. Our energy consumption was reduced by 20 percent, and the curing effect and stability met all our expectations.' Suzhou Advanced installed VCP lamps on every flexo press it installed. Explained Mr. Zhong, 'After so many years of cooperation with GEW, we have got a lot of benefits, and what's more important, we obtained mutual trust.'

So when Tekey Zhang, technical general manager of Chinese GEW representative Shanghai LongShine Printing Tech, recommended GEW's latest E2C curing technology, the company installed a trial system on its new Mark Andy 2200 flexo press in the second half of last year. Advanced technicians undertook detailed comparisons with an existing VCP-equipped Mark Andy 2200. Both are configured with eight color stations.

Mr. Zhong showed L&L the test results: 'At the same printing speed, the total energy consumed by the E2C UV system was 13.05KW, which is far below the total power of 32.34KW consumed by the old VCP system. The result was far beyond of our expectation.'

COLLATERAL REVENUE

The tests showed the E2C lamps achieve the same curing power as the VCP lamps with only 36 percent of the power. Equal curing power with reduced energy consumption means the service life of the E2C UV lamp should be significantly extended. 'The E2C lamps have been running for more than 2,000 hours so far, indicating the huge improvement when compared with the VCP UV lamp, which we could use for only 1,500 hours or so,' said Mr. Zhong.

Tekey Zhang added that GEW's European customers have seen EC2 lamps last 2,700 hours or more.

The improved curing efficiency of the new E2C lamp and reflector design meant press operators were more confident in running the press faster. Added Tekey Zhang, 'At the end of last year, we presented a demonstration of the E2C curing system on an Omet press at their Suzhou plant, and at a speed of 180m/min, the curing was sound.'

Another advantage of the new lamps for Advanced is shortened shutdown and maintenance time – with consequently improved production efficiency and reduced labor waste.

In addition, the lower temperature output of the E2C system means less heat and CO2 discharge. Although the Chinese government has not put explicit restrictions on carbon discharge and power consumption in printing factories, Suzhou Advanced puts a high value on behaving as a responsible, sustainable social enterprise.



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Colordyne press revives Indian printer

AN INDIAN PRINTING COMPANY has re-entered the print arena as a digital converter with machines from Colordyne and Cartes. Aakriti Agarwal reports

3800 Labels, a young printing firm in Chennai, has installed a Colordyne CDT 1600 PC Sprint from Colordyne Technologies, powered by Memjet technology. The digital print shop also houses a Cartes GT 364 HS finishing machine and a Ricoh Pro 751 digital printer.

R. Rajesh Kumar, creative head at Rajeswari Infrastructure who is also heading the business, says, 'I see the future is digital label printing. After market research, we found a need for short and medium run print jobs.'

The company started in 1977 with two Heidelberg 4-color presses, one Dominant and one Mitsubishi press along with two imagesetters. These presses catered to offset commercial printing in the domestic market and carton printing for the international market. Due to a slowdown in the print market, Rajeswari Infrastructure divested the business in 2003 and sold all its equipment. It was in 2011, when the team visited Drupa, that they decided to buy the Colordyne press and get back into the market, this time with digital label printing. The press was installed in February 2014 at their Chennai unit with a production area of 4,000 sq. ft.

Kumar says, 'We provide test marketing samples in roll form that no one else does. Proofing is a major industry that is not entirely catered to. Secondly, the market has become very dynamic, where instead of tapping new clients, printers are retaining old clients who are looking at re-branding their products. Labels and flexible packaging are the only things they can play with. We see it growing, so we got in with digital.' Currently, the company is doing sampling on the press and is focusing on the export market.

Citing the advantages of Colordyne over other digital presses, he says, 'We went with it because of the Memjet print head technology, plus there is no click charge with Colordyne. The post sales service of equipment is great.' It can print on a variety of substrates ranging between 80 and 250 gsm. The company has already done trials on PP, PE and PVC in addition to standard label stocks. The inks are being imported from Colordyne's office in Singapore.

For finishing, 3800 Labels was impressed by the Cartes equipment, which has inline screen printing, hot foil stamping, flat die cutting and laser cutting stations along with a slitter rewinder and a web inspection system. The equipment complete, with the UV curing system, uses inks from Marabu. 'A combination of these two machines provides what we were looking for – a great look and feel with short to medium run print jobs,' says Kumar.

The company is looking at exploring new applications that can be printed on the Cartes. Kumar says, 'We have made labels using engraving and die-cutting only. We are looking at capitalising on our equipment. So we are taking time to evaluate what all can be done and how we should target the right customer.'

Using the two presses, the company is also looking at venturing into security printing. It is already printing bar code labels for the footwear industry. Kumar says, 'Memjet



PRO 751 digital printer from Ricoh at 3800 Labels

technology provides the ability to print fine text for security printing and variable data. We are also looking at a niche segment of premium liquor and customized products in markets such as Europe and U.S.A. We want to create a value that no one else will be able to provide, at least for the next couple of years, that's why we are targeting liquor with our high quality labels. We have sent samples for approval and will start production once the price is agreed upon. Clients are happy with our samples because they get the same quality standard with our imported equipment.'

Kumar accepts that labels printed on a digital press are a little more expensive than labels printed on a flexo press, but he adds, 'Printing on Colordyne is more reasonable than printing on most other digital presses. We are fairly competitive in the market.' All jobs are manually checked for quality control prior to dispatch.

Rajeswari Infrastructure aims at breaking even in the next two years. It is targeting a turnover of Rs 6 crore (approximately one million USD) in the current fiscal. The focus will be on generating 60 percent revenue from the domestic market and 40 percent from exports. ¬¬¬

The installation by Rajeswari at 38 Hundred Labels & Prints is the first of possibly three additional systems at locations around India.

COLORDYNE IN INDIA

Gary Falconbridge, president at Colordyne Technologies, has great expectations for this market. 'Colordyne expects that the Indian market can support multiple unit sales with its tremendous volume potential. Once on stream, we would expect around 10 to 15 units of the production class to ship per annum. We foresee India's digital printing industry to be an expanding market opportunity, which, in time, would surpass China.'

Colordyne presses are sold through local agent Graphitech, which is providing both service and commercial support for the CDT Production class inkjet printing system installed at Rajeswari Infrastructure.

Falconbridge says the Indian installation is part of a positive global trend for Colordyne as interest and awareness of its brand and products continues to build. 'We are just short of two dozen installations of our CDT 1600 Production class systems around the world – a number growing monthly. These installations range from our base model 1600 production class sprint unit and 1600 production class rotary pro, to our flagship model, the 1600 production class laser pro digital printing press.

'Our main opportunity is to continue to build awareness of the availability of our technology and show how and where it fits in to provide both label manufacturers and brand owners with the ability to make short and/or medium runs more profitable and desirable.'



R Rajesh Kumar of 3800 Labels with the newly installed Colordyne press at his unit in Chennai

PRESS SPECS

Colordyne Production class presses are designed for prime labels as well as business labels and tags. The presses have a resolution of 1600 x 1375 dpi and speed up to 225 fpm. They are targeted toward short to medium run flexographic printing and short to long run variable or sequential jobs. The prime and business label markets include pharmaceutical, food and beverage, home goods, auto, and product marking and branding.

The Production class presses have a five print head configuration – one print head per color CYMK and an additional head for spot color, if needed. This represents a total of 350,000 nozzles, which allows the press to achieve such high speeds and resolutions, including very sophisticated half-toning techniques. The Memjet printheads are consumable items.

The press is available in a number of finishing configurations, including varnish, lamination, rotary or laser die-cutting and more.

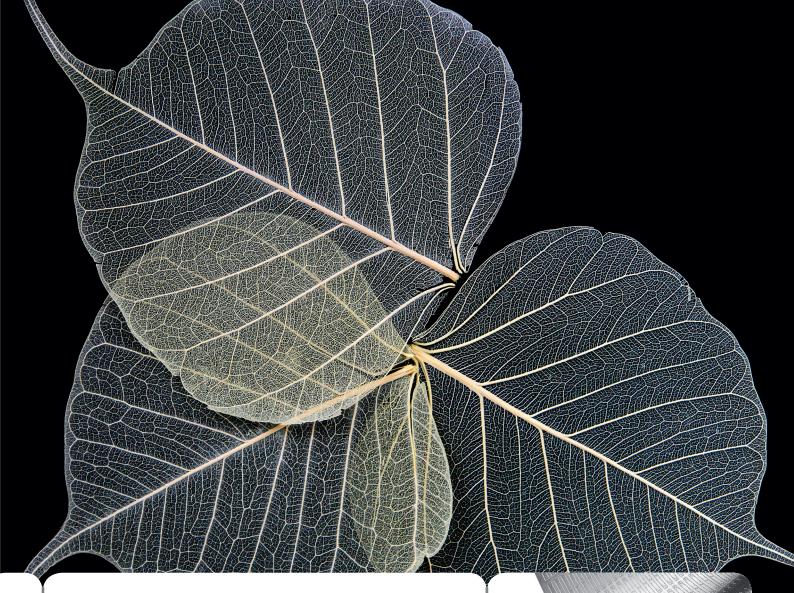
Enhancements have been made to the Colordyne print engine technology that can be retrofitted onto existing CDT 1600-PC Laser Pro, Rotary Pro, and Sprint units for an added cost. The upgrade brings faster speeds of 225 feet per minute (45 ips), improved resolution (1600 x 1375 dpi) – as seen on the Rajeswari press – and enhanced print quality due to uncompressed files and better dithering patterns.

Adds Gary Falconbridge: 'We will be making some additional product announcements at Labelexpo Americas this year as we continue to increase ease-of-use, speed, color management, increased availability of more materials – both coated and uncoated, further reduce set-up time and material along with additional time and cost saving efficiencies.'

Colordyne recently announced a Production Class Retrofit program which allows the CDT 1600- PC print engine to be integrated onto existing flexo presses.



THE unit has paintings of prominent print personalities on the walls



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(L-R) Mrva Patrik, sales manager AG Foil; Henrich Palkech, general manager; Richard McGuire; Stefan Kucerak, production manager AG Foil

Slovak converter embraces Chinese press

CHINESE PRESS MANUFACTURER Weifang Donghang wants to establish itself as a reliable partner for European converters. Andy Thomas reports on an early installation at AG Foil

AG Foil was founded in 2000 in Bratislava, capital city of the recently established Slovak Republic, formerly Czechoslovakia. The company began as a full service barcode label supplier, manufacturing thermal transfer ribbons and foils and supplying logistics and fabric care labels.

Growing rapidly, AG Foil soon became a successful exporter to nearby states, including Ukraine, Hungary, Czech Republic and Serbia. Branches were opened in the Czech Republic and Hungary and AG Foil gained accreditation to ISO 9001 and 14001.

AG Foil next decided to take blank label production in-house and in 2005 brought in its first converting machine. Two years later the company diversified into full color product labels after buying its first flexo press, a second hand Mark Andy 830. This was replaced by a Gidue Quadra press followed by a Combat 8-color machine in 2009, both of which are still in operation.

A Cartes converting line was added, delivering a combination of laser die cutting, screen and hot stamping in one pass.

In 2012 AG Foil started looking hard at the local wine label market. 'We are located in the middle of important wine regions from Vienna and the Czech republic to the Carpathian hills,' says company general manager Henrich Palkech. 'This is a market that requires printing on structured papers, and that's why we wanted offset with its heavy printing pressure.'

Looking around for a specialist press for this demanding

market, AG Foil came across Chinese press manufacturer Weifang Donghang at drupa. Donghang had just made a major move into Europe supported by a network of distributors put together by industry veteran Richard McGuire.

After their initial meeting, in early 2013 Henrich Palkech and sales manager Mrva Patrik travelled to China to see the Weifang Donghang factory.

'We found out that semi-rotary was the right offset technology, good for mid run lengths with cheap plate costs compared to flexo,' says Patrik. 'The higher resolution was also important. Even though we already use HD flexo, it is not the same. We are printing 80 lines per inch in offset and 50-55/6 lpi in flexo.'

An offset press would also be a point of differentiation for AG Foil, as most local converters are using flexo, asserts Patrik.

Patrik says it is not only the wine sector asking for offset. 'The local food industry is now asking for higher quality than flexo, and this could become a new market for us. When label buyers have the chance to compare offset and flexo, everyone chooses offset because of higher quality. We already do the best flexo on the market, but especially on vignettes, flexo can't achieve the quality they require, even with HD.'

Did AG Foil's management team consider a digital alternative? 'We are not interested in digital printing because there are many digital presses in the market here that don't have customers and the technology is soon obsolete,' says Patrik. 'When digital





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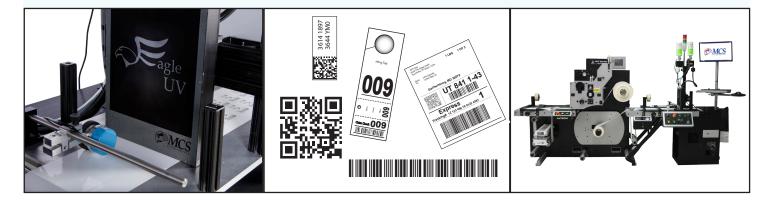
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is at the top of its development we might consider it.'

AG Foil then became the first continental European converter to sign for the Chinese-built DH320 intermittent offset press, which Weifang Donghang displayed on its impressive stand at Labelexpo Europe 2013 before shipping to Slovakia. Two more of the presses have now been sold, including one to North Africa.

The DH320L press installed at AG Foil is an intermittent 6-color UV wet offset machine. There are two semi-rotary flexo stations, once at the beginning of the line to lay down a white for printing on metallics, and a final station for varnish, followed by a semi-rotary die-cut station. Added value labels are taken to the Cartes converter for finishing. The DH320 press runs up to 63 m/min and has a print repeat of 175-350mm.

AG Foil's finishing department has a battery of Wasberger inspection-rewind machines.

The installation of the DH320 is expected to accelerate the already strong growth at AG Foil – something the managers will need to adjust to.

'We have grown every year since the company started,' says Henrich Palkech. 'In 2012-13 we were changing from a mid-sized to a bigger company. Before, we were hands-on owners but now we have to be managers and delegate jobs because we have too many things to organize. The company must work while we are at exhibitions or visiting VIP customers.'

VETERAN NETWORKER

Although Chinese press manufacturers have made attempts to sell presses on the international market before now, converters in Europe and North America have generally proven skeptical, pointing out that despite the lower price, consistent quality, spare parts and technical backup are difficult to guarantee.

Weifang Donghang Graphic Technology is looking to change that perception with the help of Richard McGuire, well known in the international label industry for setting up the Ko-Pack distribution and technical support network in Europe in the 1980s, going on to found and run Ko-Pack Europe in Peterborough, UK, between 1984 and 1995.

McGuire is looking to do the same thing again, this time with the Donghang company, with whom he has worked in an advisory capacity since 2005.

McGuire now has the title of sales manager Donghang Europe and has spent the last two years signing up experienced, technically minded distributors. These include Carlos Agullo's ACP in Spain, Jose Martin at MGE OCC Italy; Andrzej Basinski of Netflex Poland; Jerry Porter, PorterPac Germany; as well as a South African agent Johan Kotze of Label Tehnologies. Local stocks of spare parts will be held in Germany and the UK.

As well as the DH320L intermittent

offset press, Weifang Donghang has also developed the DHS520 mid-web flexographic press, available in web widths from 330mm to 1.65m. It is equipped with dual servos on each print station and a touch screen for setting print pressure. Print speed is up to 200 m/min. The press has been designed to fit European UV units such as GEW E2C UV and chill drums and has a substrate range between 12 microns and 350gsm board. The DHS series is available with Stork Screen units and in both roll-to-roll and roll-to-sheet configurations.

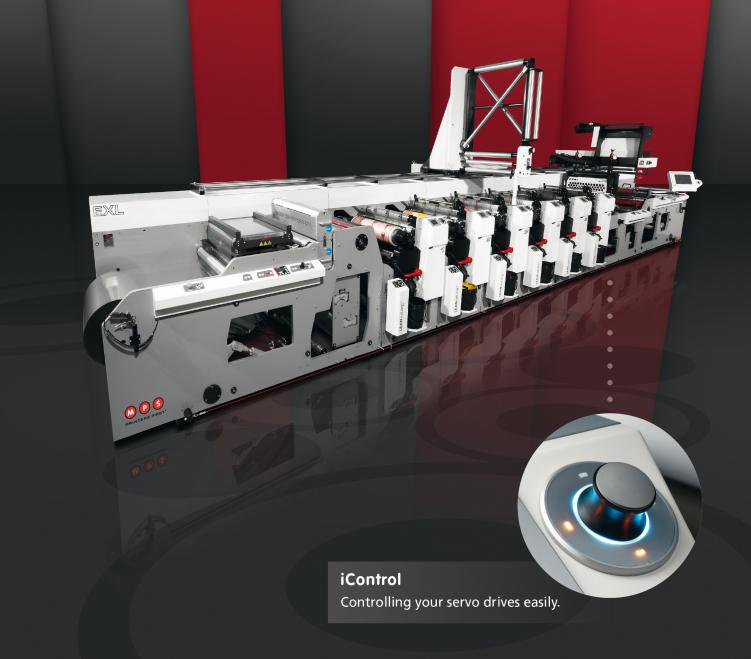
A digital press using LED-cured Epson inkjet heads is also available and was shown at Labelexpo Europe.

Weifang Donghang owner Fanxiang Meng is clearly committed to developing these machines, having invested in an impressive new factory in China – an 85,000sqm plant on a 100 acre plot – to back up Donghang's machinery program.

It will be fascinating to see how this new Chinese press brand – allied to a strong local support network – will fare in Europe's highly competitive narrow web press market.



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AWA leads liner discussion

AWA'S 2014 Global Release Liner Industry conference outlined some of the major trends impacting the pressure-sensitive label market. David Pittman reports

There is no good case for moving from glassine to filmic liners providing glassine capacity remains adequate and there are no significant overall cost savings. That was the message from Alan Hazlewood, group technical support manager at global converting group Skanem AS, addressing the recent AWA Release Liner conference in Amsterdam.

Delivering a converter's view of liner trends, Hazlewood said that of the release liner options currently available – glassine, polyethylene and, relatively new, polypropylene – glassine is still the most reliable, so there is no major case for moving away from it. But, he asked, 'Is there sufficient glassine capacity to meet industry needs?'

Hazlewood described the trends affecting PE liner, including shortfall in global availability, dependency on fluctuating oil prices, and its technical downsides – wind-up tightening and print ghosting on the adhesive. On the other hand it has a proven performance in 'no-look label' applications. Hazlewood conceded that savings are potentially available from a switch to PP liners, but he questioned whether they have proven themselves in practice: they are heat sensitive, stretch on press and suffer some problems in label positioning, he said.

Hazlewood concluded that the disruption of switching to film liners from glassine would require a significant reduction in overall cost.

Turning to linerless labels, Hazlewood said Skanem is currently exploring options in the foods, petrochemicals, home and personal care markets with Skanem's own linerless labelstocks and dedicated dispensing lines.

GLOBAL, BUT LOCAL

The rush for globalization now needs to be tempered by a more realistic assessment of local market requirements, said keynote speaker Michael Apperson, CEO of Loparex.

The old "global" involved a handful of production sites around the world supported by regional sales, said Apperson. But the modern business environment must take into account local needs and demands.

'It used to be possible to provide global customers with the same products for markets around the world, but as they have

become more local, so over-specified products produced for western markets are not going to be accepted in other markets.

'It was easy to claim a global presence in the old model, but with the new "global" you need to be designing and manufacturing products for individual markets and their requirements.'

As an example, Apperson compared the profile of industrystandard US premium graphics liner with that of graphics liner in China, where local quality, performance and price requirements have created quite different market drivers. On the flip side, understanding regional differences can pay dividends, with six to 10 percent growth achievable for those adopting such a 'strategic synergistic' approach.

Apperson's analysis was supported in a later panel session by Tomas Rink, president of Ritrama, who noted that for western-based companies like Ritrama, globalization 'means spreading the risk'. Local knowledge is essential in maintaining a competitive edge, said Rink.

CONSOLIDATION CONTINUES

AWA Alexander Watson Associates' president and CEO, Corey Reardon, went on to provide his annual overview of market trends. 'Consolidation', he said, 'and backward and forward integration continue across the supply chain. What were, in Europe, eight companies are now – in a short period of time – reduced to just two.' Capacity investment continues in the emerging markets, and while growth in the Asia Pacific region – the world's largest market for release liner – is slowing, it is still 'a significant driver of global growth', growing annually at two to three times the rate of the markets in North America and Europe. Worldwide, he showed, growth in 2013 increased at around 4.7 percent over the previous year, with 48 percent of release liner demand focused on pressure-sensitive labelstock, of which approximately 80 percent is in-house siliconized.

Investment banker Thomas Blaige looked in more detail at industry merger and acquisition activity, pointing out that there are now 40 transactions a year in the label industry supply chain. He cited as a prime example the recent creation of Coveris, bringing together five leading packaging companies

FUTURE EVENTS

AWA's next Label Release Liner Seminar is scheduled to take place in Chicago, USA, on September 8 2014, just before the Labelexpo Americas exhibition. Details of all upcoming events are available via the company's website, www.awa-bv.com.

AWA Alexander Watson Associates has also published its 2014 Global Release Liner Market Update 2014. Across all market segments, it brings together the important facts on volumes, growth rates, market structure and regional characteristics, and raw material trends. It also shares the results of AWA's annual 'voice of the industry' survey, which include globalization, M&A activity, sustainability and environmental issues, industry costs and profitability, and growth expectations by region.

The Global Release Liner Market Update 2014 will shortly be joined by two new additions to the library of reports on release liner – 2014 editions of the company's established in-depth North American Release Liner Market Study and Asian Release Liner Market Study, which partner the new edition of the European Release Liner Study published last year.

to make a single manufacturing entity with revenues exceeding two and a half billion US dollars, and a presence in more than 20 countries.

This has been matched by considerable strategic activity in the coatings sector – for example, Mondi, Loparex, UPM, and Avery Dennison. Checking back on the sector's top 50 companies in 2001, he showed that there had been a huge change: 58 percent have merged or sold in the intervening years. 'The big are getting bigger – widening the gap', he commented.

Greg Rudder, editor of US-based PPI Pulp & Paper Week, confirmed these M&A trends in the US. In specialty release liner production, said Rudder, the 'big three' – Expera, Boise, and UPM – now sell 60 percent of roll demand. All industry players are revising their business strategies. Bemis, for example, is closing its pressure-sensitive materials plant; and CCL is now focusing on acquisitions in geographies other than North America.

Fox River Associates is a supplier of siliconized film and paper release liners in North America which has bucked these trends and thrived by focusing on local markets and specialty products, providing high levels of support in terms of innovation and inventory management.

Company president Duncan S. Wall speculated on whether the River Associates business model could be replicated in Europe, concluding that the entry cost would be very high, and that the presence of so many commercial siliconizers would make success difficult.

GLOBAL MARKET BY REGION 2013



SUSTAINABILITY UNDER THREAT?

The lack of progress in liner sustainability was addressed by Calvin Frost, CEO of US-based Channeled Resources Group. Frost said that less than 10 percent of all spent liner generated in pressure-sensitive roll labeling is currently recovered. Reuse, for example as pelleted fuel, and recycling are both practical for release liner, while recycling PET film liner is a 'no brainer'. Frost argued that the array of environmental legislation, scorecards and other standards is stifling rather than encouraging sustainability, and a single. standard certification is required. In the complex and fragmented pressure-sensitive label value chain, only legislation will drive recycling, concluded Frost.

Virginia Janssens, managing director of Europen – the European Organization for Packaging and the Environment – looked at the impact of the 2014 EU Waste Legislation Review. Most European countries, she demonstrated, already meet the Packaging and Packaging Waste Directive's 55 percent overall recycling target, with 64 percent the average figure.

Targets are likely to rise significantly, however, across most packaging material categories – including paper and cardboard, currently at 60 percent, and plastics, currently at just 22.5 percent. While release liner was removed from the pan-European list of materials considered 'packaging waste', individual EU member states can decide for themselves how to categorize liner waste, which continues the uncertainty that is a real concern for the label release liner industry.

POLYOLEFIN TRENDS

The global polyolefins market and pricing outlook is a key factor in filmic release liner production and demand development. Remko Koster, director, Polyolefins, for Europe and Africa at IHS Chemical, said that as global economic growth gradually picks up, oil prices are currently moving down (although, he said, they will recover). North America's active source of hydrocarbon feedstock, shale gas, is creating capacity growth in that region, making it once again a competitive supplier of PE. Meanwhile, Europe's major chemical companies are rationalizing capacity, with PE (mainly HDPE) production plants closing in 2013-1015, delivering a resultant seven percent capacity reduction.

Koster expects to see growth in demand in the short term for PE – levelling off thereafter – and forecasts that 2018 demand worldwide for HDPE, LDPE, and LLDPE will be 102 million metric tons. The overall price of PE resins will not be dictated by the lower cost base of USA and the Middle East, but by the higher cost base of Europe – so users may not see the price reductions in PE polymer that the use of sources like shale gas might suggest. Since PP is derived from crude oil, there is less likelihood of PP resin producers gaining price advantage as will the producers of PE resins from shale gas.

FUTURE PROSPECTS

Cory Readon posed a key question to a supplier-led panel on wider market trends: 'The conversation always seems to get around to "cost out". What are we doing in terms of innovation that is NOT focused on taking cost out?'

In response, Christian Velasquez, global PSI market leader for Dow Corning, said his company is actively pursuing new end-use markets, such as electronics. Sjaak Elmendorp, VP technology at Avery Dennison's Materials Group, added sustainability scorecards and reduced dispensing line downtime to the list, adding that, in the latter context, 'film liners offer a huge benefit'. Velasquez commented that 'film liners are growing at a faster rate than paper.' Sean Duffy, global business manager for Silcolease Release Coatings added 'when they are cheaper – much cheaper! – they will replace paper.'











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Supply chain experiences paradigm shift

THE TOOLS TO REVOLUTIONIZE PACKAGING WORKFLOWS from origination to delivery are now available, but as Danielle Jerschefske discovered at DScoop US, global brands have yet to adapt

The ninth Dscoop HP User Group event held in Orlando in March was focused appropriately on Breaking the Mold, encouraging HP graphics systems users to move away from conventional workflow practices and embrace the modern tools available to improve today's tired business procedures.

Ed Wiegand, executive vice president at The Matlet Group, led a session with the support of digital workflow experts to demonstrate the next level of end-to-end digital solutions. Using two different workflow systems, labels were printed digitally on an HP Indigo WS6600 press and finished in the showcase area at the event while folding cartons were produced digitally on an HP Indigo 10000 sheetfed press and converted at Matlet's facility a few miles from the Dscoop conference.

Brands have to meet the needs of today's shopper. Consumers live in the connected world, obtaining information instantly, whether product reviews, game scores or weather reports. On-demand delivery of packaging engages with consumers like never before. However, CPGs manage packaging specs and their supply chain based on analogue printing. The chain is not set up to be fast.

Digital package printing converters have a great opportunity not only to optimize their own systems internally, but also the chance to reduce the cost and waste their customers incur when working within the existing infrastructure. The labels and packaging industry is on the brink of a paradigm shift in the way print orders are managed using fully integrated, automated, end-to-end digital workflows.

PACKAGING POTENTIAL

Procter & Gamble is a regular corporate supporter of the Olympics every four years. The company spends significant time and money on advertizing campaigns, and during the Sochi event this year created customized YouTube commercials praising the winning athletes in real time as each sporting event occurred.

The customized event packaging required six months to a year of planning

for the supply chain to launch to shelf. Ideally, they would have wanted to create versioning on their packaging, but their infrastructure doesn't allow them to do this. In the conventional way, it takes weeks just for approvals.

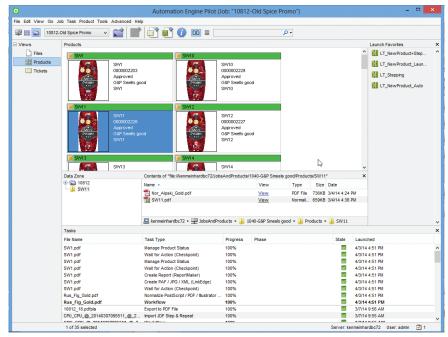
'Imagine, within days of athletes winning a medal, Procter & Gamble delivers hyper-customized packaging to the marketplace with their major sponsored brands,' said Ed Wiegand. 'With existing digital workflow automation and printing systems, brand managers have the capability to create labels and cartons that incorporate variable data and images based on the multiple countries with representatives that won medals in any of the sporting events.'

Label Traxx has been supplying label converters with management information systems for over 20 years. In 2008 the company partnered with HP as the Indigo technology was taking off and users needed improved workflow integration to leverage the incredible possibilities provided by digital printing.

The supplier developed the Digital File Planner in 2010 that automatically arranges grouped labels into files/plates for press, reducing prepress time by as much as 90 percent. With this capability, "Imagine, within days of athletes winning a medal, Procter & Gamble delivers hypercustomized packaging to the marketplace with their major sponsored brands"

users are empowered to create a Product Database that serves as a record for every label specification made. In the past, this would have been a tedious endeavor, taking hours for even the most knowledgeable prepress worker to complete. Now, by using a spreadsheet, this cumbersome task can be automated. This means more work getting to the press faster, and more work getting out the door, delivered and invoiced more quickly.

The challenge is getting prepress folks to use these tools. Only a small percentage of Label Traxx operators utilize the capability. In fact, an audience



A screenshot of the Label Traxx Digital File Planner incorporating variable imagery





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AN example of an Old Spice label with variable images created with automated workflow systems

poll during the session revealed that the majority of print providers in the room were still using job jackets. With modern systems available, and clients eager to engage the connected, in-the-moment consumer, the industry must let go of the conventional way of doing things and move forward.

With Label Traxx the process is rather simple. Once the spreadsheet is in the system, the software gangs and groups labels together in order to run at maximum efficiency. Because Label Traxx is integrated with Esko's Automation Engine, the files are sent direct to the HP SmartStream print server in minutes rather than hours.

Ken Meinhardt, president of LabelTraxx, explained, 'With this integration, if the structure is set up properly, it is repeatable and goes very fast. As the industry gets more of these version orders, converters must be able to streamline the workflow.'

Wiegand said, 'The biggest limitation now is management and leadership. They have to push their production people to use these automation tools. At least getting repeat orders set up to take advantage of these tools.'

COMMERCIAL INTO PACKAGING

Matlet Group uses PressWise cloud-based software to drive the variable imagery of the folding cartons it produces. Developed for the commercial printing market, the software uses a base template for the cartons supported by a database of images to create the variability required. During the demonstration, the software was pulling images in from the database on the fly to print the variations of folding cartons.

Wiegand continued, 'The commercial group has been doing this play with variable imaging for years, and it is a good time to reapply these learnings to the label and packaging segment. The system is complex, but there are smart people around that can help converters deliver this solution to their customers.'

One reason commercial printers have more experience with variable data printing is that most work is a just a few master prints, or even one, and lots of new work. The packaging market requires not one or two prints, but 500 or more.

Said Wiegand, 'Don't take "no" from a customer. Go to them as a digital printing solution provider, and explain how you want to create value for their business. It's about going to your customers and educating them on what can be done with this kind of workflow.'

Matlet Group is die cutting over 30,000 folding cartons per hour using a KAMA system, and can emboss with the same machine. An ABG Digicon I finishing unit was used to convert the labels produced "if the structure is set up properly, it is repeatable and very fast. As the industry gets more of these version orders, converters must be able to streamline the workflow"

at the event.

This shift in workflow methods means that converters have the chance to sell on the basis of inventory management and the removal of complexity from the supply chain, making their customers more productive and profitable. When going to a client, converters should be conscious of their language. It's more than selling labels and packaging; it's about managing their waste and streamlining their supply chain. This is an opportunity to step out of the traditional purchasing relationship by repositioning your business with a new strategy and marketing plan.

There is a stumbling block, however, in taking such solutions to customers. They are not re-evaluating their supply chain to adjust for this modern technology as of yet. They need to be educated in what's possible so they can start assessing their processes for ways to implement this tool of virtual on-demand printing.

Said Wiegand, 'It is a complete ecosystem. Brands need to grow, consumers want packaging to be relevant – and converters can bring the technologies to the table to facilitate it all. The future of packaging production will have a centralized workflow with a localized print solution. We need to change conventional thinking.'



AN example of an Old Spice label with variable images created with automated workflow systems



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Webtech finds press market niche

WEBTECH ENGINEERING specializes in low cost, high quality flexo presses and is building a reputation outside its native India, as Aakriti Agarwal reports

Webtech Engineering was founded by Sabhajeet Singh, a mechanical engineer by training, in June 1998, initially to build business forms presses.

In 2002-03 Webtech invested heavily in advanced machine tools to manufacture its own high quality printing press parts, filling excess capacity by contract manufacturing for outside companies. Today, manufacturing narrow web presses represents 15 percent of Webtech's total turnover. It has sold 800 machines across all market segments since it was founded. In 2013, the company sold 18 web offset machines and 15 flexo, of which four have been exported to the United Kingdom, Bangladesh and Nigeria.

Webtech Engineering decided to start developing flexo presses for security printing applications in 2003 and sold its first combi press in 2004 to Hitech Print Systems, a leading security printer in Andhra Pradesh. The company 'soft-launched' its flexo press in January 2011 while the first commercial sale happened in 2012 at Labelexpo India.

There are two flexo press models – Webmark and Flexomaster. Webmark is a compact, entry level CI flexo available in up to four colors; Flexomaster is the work horse, available in up to 12 colors and running at a speed of 150m/min. It has a semi- top loading system where the shaft is put into the cylinder outside the press and is top loaded onto the machine. The press can handle a variety of substrates starting from a 20 micron film to 400 gsm board.

Webtech thrives on engineering customization. 'The design is fluid. We make machines according to the customer's requirements and suggest what technology suits the applications,' says Kishore Kumar, manager marketing at Webtech Engineering. Indicating the current trends, he says 'Flexo is growing very well with demands such as online cold foiling, corona treatment, UV, die cutting and we even closed a deal with online hot foiling.' Some of the company's biggest clients include Stick Labels in Hyderabad, Gopsons in Noida, Master Simex in Bangladesh, Tripple Gee in Nigeria, Hemkunt in New Delhi and CM Printers in New Delhi

Webtech Engineering is not making a fully automated computerised machine as of now, but has plans for a 'well priced' full servo machine soon. 'Currently, we are handling the entry- and mid-level segments in flexo. We have expertise in various technologies such as offset, flexo, gravure, slitting, sheeting, cutting, foiling and coating coating,' says Kumar. The company also manufacturers digital machine platforms and supplies to leading inkjet manufacturers in India, and has started selling a machine to print pharma inserts printed on 30 gsm paper. 'Pharmaceutical industry is asking for thinner paper to be able to put more information in the same packet,' he says.

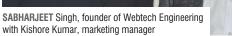
Quality is a priority for every department. Gear boxes for all flexo presses are imported from Europe, and an imported CMM inspection machine checks all finished parts. All employees, whatever their final work assignment, are trained on the operation floor. Kumar reasons, 'Selling machine is not selling a commodity; it's a solution for which sales people should know the problem.' Webtech Engineering has strategically placed its service staff in Pune, Kolkata, Chennai and Hyderabad to cater to customers across the country. The company also has channel partners in the UK, Dubai, Malaysia and Philippines where trained engineers are posted for handling service issues.

The USP of Webtech Engineering is cost. 'How many companies today can afford a million dollars for one printing machine?' asks Kumar. 'I give it to them at almost one eighth of the price of a European press. So they get enough room to break even, make money and keep investing in the new technology.'

The company is exporting to more than 25 countries. It has about 40 installations in Middle East, five in Nigeria, four each in Ghana and Sudan, three in Germany and two in Uganda. The company is targeting Latin America for future expansion. Webtech Engineering is developing channel partners across Africa and is expecting to finalize them by the year end.

Kumar points out that for the label industry to grow faster, the players need to join hands and grow together. He says that the difference between China and India is government support and policies. China has a business strategy where 20 to 30 companies come together and export. They have trading houses to facilitate export and growth. It doesn't happen in India. 'The ancillary equipment manufacturers, machine manufacturers, OEMs have to come together and promote themselves in a better way,' he concludes.





JULY 2014 | L&L



Veepee gains Esko HD flexo certification

DIGITAL flexo solution delivers results that rival offset and gravure for Veepee as it also becomes one of the first Asia companies to adopt the technology and full HD flexo certification. Aakriti Agarwal reports

One of the leading Indian tradeshops, Veepee Graphic Solutions, has become one of the first Asian companies to adopt Esko Full HD Flexo and obtain the full HD flexo certification. 'The installation of Esko's CDI with Full HD Flexo technology and the subsequent certification has put us in a select group of elite operations, globally certified to Esko Full HD Flexo,' says Jai Chandra, managing director, Veepee.

Established as a design studio in 1961, the Bangalore office, a part of the Veepee Group, supplies flexo plates to flexo converters. Among its key customers are Pragati Packaging, Sai Packaging, Multiflex, ITC, Ajanta Packaging, Positive Packaging, Kalpana, Propack and Universal Print Systems.

As a longstanding Esko customer, Veepee followed the development of Esko's Full HD screening and inline UV technology. 'With numerous developments in the flexible packaging industry favoring flexographic printing, there was a need for higher solid ink density and better ink lay to match the quality of gravure printing,' says Chandra. 'Though there were a few competing technologies, we decided, again, to work with Esko as Full HD Flexo has proven to be a stable, consistent and reliable technology.'

Veepee's relationship with Esko started in 2006 with the installation of a CDI (Cyrel Digital Imager). Other investments over the past years include licenses for a raft of Esko prepress software solutions such as PackEdge, FlexRip and Plato to name a few. In 2009, Veepee installed the first CDI with inline UV and HD screening in the Asian region.

Last year, Veepee extended its cooperation with Esko by adopting Full HD Flexo, which enabled the company to increase production capabilities. 'Working with Esko Full HD "Working with Esko Full HD Flexo, we achieve higher solid ink densities with the existing press parameters"

Flexo, we achieve higher solid ink densities with the existing press parameters. We can print clean solids and extend the color gamut thanks to the microcell technology; and we can eliminate the halo around text and lines – a common phenomenon with flexo printing. Thanks to these benefits, we took label and flexible packaging printing to the next level and produced results that can be readily compared to offset or gravure. A lot of trials are being undertaken in corrugated post print, which is the next emerging market for flexographic printing. Our decision to invest in Esko Full HD Flexo was a game changer,' says Chandra.

Veepee is now poised to embrace the emerging possibilities. Chandra says, 'The flexo prepress business is expected to grow in the next 10 years, with an important part of that growth in the flexible packaging and corrugated sector. As business is getting more localized, we will be looking at a 'spoke and wheel' module, where prepress will be done at a centralized location and multiple plate processing units close to our customer sites. This will help us service our customers better with faster turnaround times and also reduce investment costs on software and infrastructure. With stable imaging systems such as Esko CDIs with Full HD Flexo, we are confident to make this business module a big success.'

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MULTITEC factory in Faridabad

Multitec tops Indian press league

LABEL press manufacturer Multitec was founded in 1983 in Faridabad, part of the national capital region, and sold 19 presses in 2013-14 – the highest number of label presses sold by an Indian manufacturer in the last fiscal. Aakriti Agarwal reports

The company started out manufacturing accessories such as slitters for newspapers and later moved to making machines for computer stationery. In early 2000, Multitec diversified into manufacturing sheeting machines. But when paper mills started using machines catering from 25 to 30 tonnes in-house, Multitec chose to move out of the business. Amit Ahuja, sales director of Multitec then saw scope in the growing label industry. A mechanical engineer by education, he joined the company in 1996. He says, 'We have a history of re-inventing the company every seven to eight years.'

Multitec's factory currently stands in a six-acre (about 2,60,000 sq. ft.) plot of which the company is using just two-acres (about 87,000 sq. ft.). It built a painting and powder coating plant on 11,000 sq. ft. of the space this quarter. Due to power cuts in the area, the factory houses a 300 kva genset. With the onset of summer, another 200 kva genset is being added. 'We get power for only five to six hours of the eight working hours and summers are worse,' says Ahuja.

The label press manufacturer manufactures two models – Ecoflex and Ecoflex VSI. While Ecoflex is an entry level mechanical press mainly for new players; Ecoflex VSi is a servo press with an open design, allowing faster job change, a shorter web path, chill drum for flexible packaging and labels, and many options such as cold foil stamping, de-lam, re-lam, amongst others. The machine can run at 150 m/min. However, it slows down to 80-100 meters a minute when using value added features such as de-lam and re-lam, cold foil and turnbar.

Ahuja says, 'In the long run, labels and packaging is the only field that I see will continue to do well. We are trying to adapt our presses to various substrates in order to do a wider range of jobs.' Of the 19 presses sold last year, 13 were Ecoflex and six were Ecoflex VSi. Accessories for the press such as aniloxes, UV lamps and corona are imported from reputed multinational players such as Cheshire, GEW, RotoMetrics and Vetaphone.

Multitec has sold 64 label presses since 2008 in India, of which eight are Ecoflex VSi. This model of the press was launched at Labelexpo India 2012. 'It's picking up because the next four orders are all Ecoflex VSi. A start-up business buys Ecoflex because it is a low budget press and is easier to handle. Experienced businesses upgrade or repeat their purchase of Ecoflex VSi,' explains Ahuja.

Multitec invests a week in quality checks on the press once it is manufactured. Gears are tested and the units are run and checked at various stages prior to press assembly. Then the complete machine is run and charts are generated to assure a quality product.

Value for money and press quality are the company's biggest assets. He says, 'It is the only and the biggest advantage we have. Value for money does not imply being cheap. It translates to giving the right product at the right price. We are giving a machine that will generate excellent output at that price.'

Multitec has one office in Mumbai and another in the South for post sales service in India. The company also has six engineers on call for servicing customers. It has sales agents in Algeria, Netherlands, Poland, South Africa, Sri Lanka, Lebanon and Jordan and a sales and service agent in Russia. The company has also engaged a third party contractor for Europe to service customers in any part of the continent. Multitec sold two presses in Europe – one each in 2008 and 2010.

However, the company got a good response at Labelexpo Europe. Ahuja says, 'At the show, we generated leads from countries such as Africa and Middle East and sold three presses, one each in Iran, Jordan and Zambia.' For Labelexpo India, to be held from 29 October to 01 November 2014 at Pragati Maidan, New Delhi, the company is looking at getting into automation of its presses.

Multitec has witnessed a growth of 13 percent in the last fiscal and exported five presses, which is approximately 30 percent of its revenue. 'We are hoping to get two big orders from Lebanon. Dubai and Sharjah are great markets too... There is a lot of scope in Latin America as well, but post sales service is a challenge due to distance,' he says.

Pointing at a trend shift in the Indian market, Ahuja says, 'Label printers abroad always buy a fully loaded press. They like to have as many options as possible. Indian buyers are also making that shift now. The trend is shifting to all UV with an average of eight stations.'

Talking of the labels industry in India, he says, 'There is growth but it is getting tough. The price of raw material is going up and margins are reducing. Label printers will have to increase their pricing. Although margins are still good, they have shrunk considerably as compared to three to four ago. Also offset and commercial printing is lying low so those businesses are shifting to labels and packaging. Label printers need to be more organized on the shop floor and improve efficiency by putting systems in place. An organization can't be run by an individual. Most of them need to run their units more professionally.'

Multitec employs around 80 people at its plant and some of them have been working with the company for last 30 years. The top management comprises employees who have been with the company for 20 years. 'We constantly engage with our staff and don't believe in daily or weekly meetings. We are a very small company but have a respected name because our presses perform. To date, I have 1100 machines running amongst 280 customers. The product is good and so is the price. Improving quality, adding new features and innovating new product lines while keeping the price in check is what keeps us going,' Ahuja concludes.



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Flexo Gurukul imparts industry knowledge

AN EDUCATION INITIATIVE organized by Fasco Printech saw international flexo expert Frank Burgos addressing a successful two-day seminar in Mumbai. Aakriti Agarwal reports

Flexo Gurukul, a two-day technical seminar organized by Fasco Printech and sponsored by Omet, kicked off on a positive note in Mumbai, India. Harveer Sahni, chief mentor at Fasco Printech welcomed the audience and emphasized the relevance of training in the label industry. 'Time has come when it is not just the trained operator who makes the difference. It is the entire team in production that needs to understand the nuances of technology employed in print,' he said.

Frank Burgos, consultant at FlexoExchange and flexo expert for the last 30 years, touched upon the basics of flexo printing in detail starting from ink components, varieties of ink, their advantages and disadvantages, ink tests, photopolymer plates, establishing main exposure time, processing, inspecting and handling of plates, and flexo plate mounting tapes. Day two saw Burgos explaining photopolymer plate defects and their effects on printing and anilox rolls, all covered in depth. He responded to attendees' questions and queries post session.

The seminar was attended by some prominent companies from across India, including Sai Packaging, Ajanta Packaging, Zircon, Creative Labels, Malhotra Graphics, Astron Packaging, Prakash Labels, Best Labels, Standard Printers Providers, Jandu Engineering, Avery Dennison, UPM Raflatac, Siegwerk, Spinks India, Fujifilm Sericol, Kaygee Loparex, RotoMetrics, Tesa Tapes, Esko Graphics, Kris Flexipacks, Daetwyler, X-Rite, Windmoeller and Holscher, Nilpeter and Multitec, amongst others. There were some offset printers such as Neat Prints from Ahmednagar at the seminar who are evaluating the diversification to label printing industry.

The event aimed at imparting knowledge starting from the basics of flexographic technology and eventually becoming more technical and in-depth, with each session welcomed and appreciated by the industry. Manish Kapoor of Nilpeter India said, 'This is a first such training program in India and the industry must support it.' Jai Chandra, managing director, Veepee said, 'I did not expect an industry seminar to be so good. I am attending it on both the days and really enjoying it.' People attending the first session were seen actively taking notes and asking questions to Burgos.

Sahni said, 'I am very happy to inform that more than 50 percent of people attending FlexoGurukul in Mumbai have travelled from outside the city.' With the aim of further developing the event, Pawandeep Sahni of Fasco Printech, took the printers' consensus on starting a print advisory system in the country. The next session of Flexo Gurukul is scheduled on October 27-28 in Delhi. The attendees in the next seminar will get a CD of the first session at a nominal cost to ensure everyone attending the seminar is on the same page.

FRANK BURGOS INTERVIEW

Frank Burgos, consultant at FlexoExchange and the main speaker at Flexo Gurukul spoke to Aakriti Agarwal about process control, standardization and optimization:

Labels & Labeling (L&L): How important is standardization in different factories of a label printing company and how can it be achieved successfully?

Frank Burgos (FB): Any level of standardization takes a considerable amount of time. It can take months if a printer is producing various types of products but it also depends on how much knowledge the company already possesses. There is always more than what meets the eye. The key is to control the process and put into place a process and protocol.

One also needs to identify the correct equipment. Technology is a relatively easy parameter, but human skill set is very critical



FULL house at Flexo Gurukul on 28 and 29 April

to put standards into practice. New procedures and protocols need to be communicated to staff, which takes time. That can be done relatively quickly depending on the discipline of the team – and management ensuring it happens.

L&L: Most printers in India believe that print quality is better if the press is run at a slower speed than recommended by the manufacturer. Is that true? FB: It is true that in most instances lower speed is conducive to better dot formation, and issues such as bounce are probably the greatest cause for diminishing quality. Surprisingly, process printing does not observe the rule of thumb that slower is better. With process printing, we probably want to run faster because the ink dries fast. We find that one gets a smoother tone if the press, in this case, is run faster. However, there is a lot of variability in a flexo press and it can't be run as fast all the time.

I also feel that many manufacturers use the (top) speed of their press to sell it. I could give you an example where a manufacturer sold his press and gave the printer a sheet that had parameters detailing the time it took to set up a job. It looked very authentic but it had unrealistic timelines and it omitted a huge number of tasks. A job that, according to them, took 15 to 20 minutes to set up, could take, when we calculated, from between an hour and up to four hours.

We need to understand the factors going into deciding the optimum speed of the press. There are instances where an operator dictates the speed the press should be run at. I recently came across a case where the work order stated the speed for printing a particular job, but this was lower than the press was capable of. Nevertheless, the operator went with that speed because it was published on the job sheet. Also, the optimum press speed could be faster if a plant manager wants to get the job finished faster.

L&L: There were some commercial printers here for two days who want to diversify into label and packaging printing. Any tips you want to give them before they venture into the new stream?

FB: Do not underestimate the complexity and difficulty of flexo. It is a not a simple transition from offset to flexo. Be very cautious. Learn early on. Process control is the key. Having said that, offset printers understand color, manufacturing, workflow etc which is an advantage.

L&L: How important is it for a new flexo printer to invest in prepress in-house?

FB: I would definitely outsource. I suggest establishing a relationship with a highly competent prepress house even if they are more expensive someone who is really controlling the process and can make consistent and high quality plates. A competent prepress source will educate about a lot of things a new entrant needs to know to manage their print process. Secondly, ask whether your initial capacity justifies the investment in prepress. Thirdly, a new printer will now have two entirely different work centers to learn about and manage. I would not complicate things by integrating.

L&L: What do you have to say about the Indian label printers you interacted with in the last two days? FB: I am surprised by how interested they are. There is a hunger for knowledge.

NEWS IN BRIEF

A ROUND-UP OF THE LATEST INDIAN LABEL STORIES

FIG SETS UP INDIAN AND MEA OPERATIONS

Flexo Image Graphics has set two independent companies – for the Indian sub-continent and the Middle East and Africa. Aakriti Agarwal reports

Flexo Image Graphics has set up two separate companies to handle the Indian sub-continent and the Middle East and Africa (MEA).

Flexo Image Graphics MEA comprises the distributorship of Mark Andy and Rotoflex for the Middle East and African markets, while and Flexo Image Graphics ISC will represent Mark Andy, Rotoflex, Kluge, Stanford, Multipess, Xeikon and T&P in India and across the Indian sub-continent. The two companies will run autonomously in the two regions.

Thomas S. Andersen, FIG, CEO, explained: 'FIG has proactively managed its portfolio during the last 13 years through one company with its main base in New Delhi. Our decision to restructure into two independent companies is a natural progression of our strategy to cover a larger area for our partners. We believe that creating two companies will enable the management of each company to have a greater focus on the success factors in the different territorial areas. The creation of two independent companies will deliver meaningful benefits to each of the businesses, the markets in which we operate, and all our customers. Our customers will continue to have a collaborative relationship with a financially strong organization that is focused on meeting their needs, and our employees will have expanded career opportunities.

Flexo Image Graphics MEA will have I. M. Shelvam as its managing director. Plans are currently underway to open an FIG office in Dubai.

Shelvam has been with FIG for many years, serving in various roles, and this gives him a deep understanding of all aspects of the converter-supplier relationship. 'In this new role, I will be responsible for all FIG business in the Arab Gulf, as well as in East and West Africa, including sales and after-sales of Mark Andy presses and Rotoflex finishing solutions, both in a direct sales role as well as through the company's strong distributor network. I know the challenges are huge but we have strengths and proven capabilities on which we will draw,' said Shelvam.

Flexo Image Graphics, ISC will be led by Gourav Roy as its managing director. Roy has been handling sales since FIG's inception. Previously, customer support was coordinated by I. M Shelvam from FIG's base in Chennai, but, with the creation of the two autonomous FIG companies, ISC customer support will now be centered on Delhi.

'In over a decade of our operations, we've come further than we could have possibly imagined,' said Roy. The impact we have collectively made in the labeling industry has been undeniable, and I am inspired to even better streamline our services so that our customers can be even better equipped to offer superior and faster services to their customers. This is what we do today, and that is what we'll do tomorrow'.



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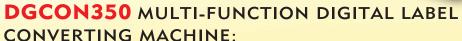
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BPIF shines light on curing

WITH KNOWLEDGE THE KEY to production efficiency, the UK's label association has held its second converter education seminar, this time on UV curing. Nick Coombes reports

The label converting industry needs to take training and education more seriously to ensure that the industry continues to respond to changing market demand in the most efficient way.

That was the message from John Bambery, chairman of the UK's label association BPIF Labels, speaking at the recent Operator Training Day held at Edale's UK headquarters building. The one-day event, which focused on UV curing technology, was a joint affair with Alpha-Cure, Fujifilm, and GEW.

Victoria Atherstone, commercial director of Alpha-Cure, began proceedings by explaining the technology behind UV lamp design and manufacture. The company has been in business since 1996 and now produces almost 150,000 lamps a year, which it sells in 136 countries around the world.

By explaining the various components that make up a UV lamp, from the caps, wires and electrodes, which act as connectors, to the heat reflective material, noble gas (Argon or Xenon), mercury halides and fused quartz that are part of the lamp body, Atherstone highlighted how each played a key role in the UV process, and how each was dependent on the others.

'For example,' Atherstone said, 'We use fused quartz for the lamps because

it melts at three times the temperature of glass and permits up to 95 percent UV transparency. For the same reason, we use tungsten electrodes, which operate at the highest melting point of any metal, have good thermal conductivity, and a low thermal expansion coefficient, and we use molybdenum for the lamp seal because its performance characteristics closely match that of quartz and prevents cracking, while being a good electrical conductor with a high resistance to corrosion.'

If the science was lost on some of the audience, the effects of faulty components and misuse were not, as samples of lamps where things had 'gone wrong' were handed round for all to see.

UV curing is not a drying process, as understood by infra-red heat or other types where moisture is forcefully removed from the inks, varnishes and adhesives leaving a dry layer on the substrate. UV is a photo-initiated process, which uses light of different wavelengths to instantly cure the wet ink or varnish. Measured in nanometres (nm), different substances respond to different wavelengths. Typically, labels and other printed packaging responds to UV-A in the 315-370 nm range, while heavier weights of ink (screen) and



CURING UV issues was done on an Edale FL-3 press

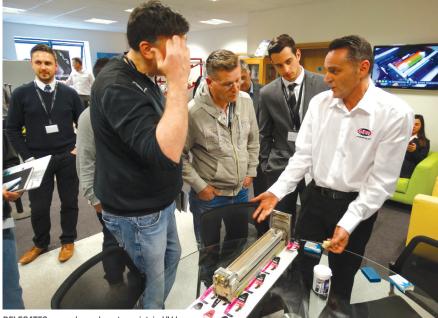
certain substrates respond to UV-A in the 370 – 400 nm range.

Having explained how a UV lamp starts up and operates under ideal conditions, Atherstone went on to explain the problem of lamp degradation, which sees at least a 10 percent drop in performance after 1,000 hours of usage, and more than 20 percent after 2,000 hours. So, troubleshooting to maintain efficiency is vital, especially as the shorter wavelengths are the first to be lost. Problems include: clouding, in which the quartz converts to crystals and fogs the lamp; mirror coating, in which the mercury and tungsten condense as the lamp cools to form a reflective inner layer; erosion of the electrode caused by the high operating temperature; lamp deformation caused by poor air circulation: external contamination when outside elements attach themselves to the lamp; cap and seal damage caused by current overload; and devitrification, which happens when the lamp can no longer spark and arc, with the resulting drop off in UV radiation. In each case, delegates were told how to spot the problem and deal with it once it had occurred.

The next section involved an explanation by James Whitehead, product manager of Fujifilm UK, of UV inks and how they are cured. He explained that printing accounts for around 34 percent of the company's total business, and in the case of printing, this spans newspapers to textiles as well as packaging. The choice of ink, he said, related to the substrate involved, the finish required, the drying/curing technology available, and other technical demands such as resistance to abrasion, temperature and salinity.

'Essentially, UV inks are made in the traditional manner but without solvent and resin. Instead, they have three significant additional components: monomers, oligomers, and a photo initiator. The first two are forced to combine by the third to effect curing, 90 percent of which happens immediately, with the remainder taking around 24 hours,' he explained.

The process is simple and straightforward, but as with the problems associated with poor maintenance of UV



DELEGATES were shown how to maintain UV lamps

lamps, curing issues can, and do, arise, and it is useful to be able to understand the problem once it has been detected. 'For example, if the ink is soft or tacky, or scratches off, or you detect an odor, you should look to see if there is sufficient light being emitted by the lamps, or if the ink has poor reactivity, or the through-cure is poor,' he added.

There are well-defined tests for all of

these problems. The reticulation test assesses the compatibility of the ink and substrate, which may be improved with corona treatment or the use of additives. The ubiquitous fingernail scratch test, which checks the solidity of the ink film, but which is open to unwitting abuse, the (unscientific-sounding) thumb test, which checks for ink dryness, and the tape test, which is all about ink adhesion. "The reticulation test assesses the compatibility of the ink and substrate, which may be improved with corona treatment or the use of additives"

Remedies vary from increasing the strength of the UV light, to surface treatment, to varying the ink film weight, to, if all else fails, changing the substrate.

The final presentation was made in two parts by GEW, the UV system manufacturer. Marcus Greenbrook, the company's international sales manager spoke of the way in which UV technology is changing to adapt to market trends, highlighting the more energy-efficient systems now being manufactured, and touching on the latest in LED-UV curing. He explained that UV curing is not just about lamp technology, but the development of cooler running and more efficient reflectors which now allow curing at faster web speeds at the same time as using less power. Even electricity consumption at press idle has been reduced.

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of substrate capability. Our latest optically tuned reflectors offer maximum curing because their actively driven air cooling allows them to absorb harmful IR rays. They run as cool as a water-cooled system, are more efficient, consume less power and generate less heat. In short, they offer you more for less,' Greenbrook said.

The latest GEW systems are designed to cure efficiently at 90 W/cm, with the capacity to run at 140 W/cm if higher speeds are required. The development of LED-UV curing, he acknowledged, is still work in progress. Requiring special (and more expensive) UV inks, and with a higher initial outlay, the financial case for LED is still in the balance, but with lower power consumption and longer lamp life, plus the likely fall in ink and system costs once volume rises, Greenbrook predicted a change would come to the UV market, and that GEW would be a key player when it happened.

Chris Nuttall, GEW's UK sales manager, made the case for preventative maintenance, stating that regular care ensures consistent performance, extends component life, and reduces the need for and cost of spare parts inventory. Often seen as a short-term inconvenience, he stressed that if properly planned into a production schedule, the medium and long term benefits were significant.

'UV has many advantages - there is no solvent involved, it achieves a higher print density, there is no need to wash up the press between jobs or overnight, and with less ink required, the need for storage space and topping up is reduced. But, there is a price to pay – and that is a commitment to a conscientious maintenance regime,' he said, outlining a weekly checklist for the UV system, and a 500-hour checklist for the lamp heads.

As UV systems become more sophisticated and controllable, Nuttall said that the days of full power as the default action were gone. Reducing power, he claimed, was too often seen as the reason for poor curing and increased the risk of job rejection and wastage. 'With today's control systems, the operator has full adjustment capability of the UV system, and does not need to rely on the ex-factory settings. UV power can be optimised to each job - and that allows you as a



to promote the need for and benefits of training

converter to differentiate yourself from your competitors," he concluded.

The afternoon involved a hands-on session in the Edale showroom, where one of the company's latest high-performance FL-3 flexo presses was used to demonstrate a number of the faults and problems discussed earlier, and delegates were given the opportunity to see first-hand some of the lamp problems and remedial actions that can be taken to improve life and efficiency.

For more information on this and other BPIF Labels events, please contact: john.bambery@bpiflabels.org.uk



Surface energy control improves print quality

MARK PLANTIER, vice president of marketing at Enercon, explains how converters can improve print quality and productivity by controlling substrate surface energy

Poor ink adhesion affects print quality, creates downtime, and leads to lost customers. In many cases the cause is rooted in complications from the substrate surface. The good news is that surface variables can be eliminated with the proper use of a corona treater. And as label converters continue to find growth in film, they must understand why treatment is crucial for producing quality print.

UNDERSTANDING PRE-TREATED FILMS

Polymer films have chemically inert and non-porous surfaces with low surface energy, causing them to be non-receptive to bonding with substrates, printing inks, coatings, and adhesives. When films are originally extruded on either Cast or Blown Film lines they are almost always pretreated with corona treaters. This increases the surface energy of the film, which is measured in dynes.

One dyne equals a centimeter-gram-second unit of force. Most converters will have a target dyne level range that works well for their specific process. While dyne levels do not guarantee adhesion, generally speaking higher dyne levels produce better adhesion results than lower dyne levels.

A common misunderstanding is that pre-treated films eliminate the need for additional in-line treatment. It's important to recognize that dyne levels decay over time and many factors accelerate dyne level decay including:

 Additives: additives are included in a film extrusion recipe for a variety of reasons, such as enabling better film handling. When a film is freshly corona treated, organic and inorganic contaminants are removed from the surface layer which actives the surface



ENERCON Corona Treater increases surface energy of a metalized film prior to printing

and increases its surface energy. Over time additives will migrate to the surface of the film, which will diminish the effects of the corona treatment.

- Contamination: handling of the film or exposure to dust, debris or oils after corona treating can impart contaminants on the film's surface
- Environment: high levels of humidity are known to accelerate dyne level decay
- Natural decay: even without additives, external contamination, or environmental factors, dyne levels will decay over time. The precise level of decay will vary based on many factors including the specific substrate and original level of treatment. Under normal circumstances dynes levels will decay and eventually level off.

IN-LINE: BEST PRACTICES

Smart converters check dyne levels before attempting to print on a substrate, but it is impossible to know if the entire roll of film has been successfully treated to that level. That's why industry experts recommend in-line corona treating.

Flexographic printing instructor at Fox Valley Technical College, Steve Utschig, says, 'Whether you're using water- or solvent-based printing you want to ensure the surface energy of the substrate is as consistent as possible. The best way to guarantee ink adhesion consistency is with a corona treater.'

The same is true for digital printing applications. Says EFI's technical service manager, 'initially customers unfamiliar with the technology may not see the need for corona treatment. During our sales process, we utilize a series of prints on the same material with different levels of corona applied. Customers quickly understand the importance of incorporating a corona unit in-line.'

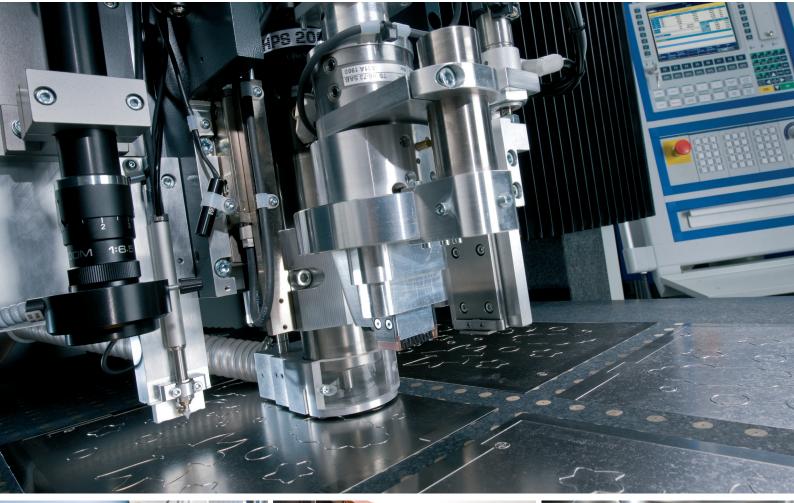
Fig. 1 shows an actual printed sample in which the corona treater was turned off in the middle of the run. Ink adhesion was far better when the corona treater was turned on that when it was turned off. While this example shows an application



FIG. 1 An example of the effects of corona treatment and ink adhesion

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where corona treating was required for printing, there are many times when simply having a corona treater provides an operational advantage.

COMPETE WITH CORONA TREATMENT

In addition to helping improve ink adhesion on print jobs that would otherwise be impossible, consider the additional benefits a corona treater offers.

You may be able to convert materials that arrive out of specification. Imagine you have a big job for your best customer and the film arrives at a dyne level less than expected. Without a corona treater on-line you will likely reject the shipment as you will be unable to print on it. But if you have a corona treater, you can use the treater to increase the dyne level of the substrate to printable levels.

Says Tom Gilbertson, Enercon's VP of application engineering, 'The best converters take control of their operation. They understand their printing processes and use all the tools available to them to make the best product possible.'

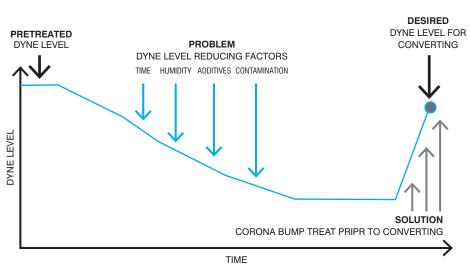
Brian Bishop, president of Gallus Group, sees a trend in the way printers are viewing in-line corona treatment. He says, 'Customers understand that having corona treatment in-line allows them successful print and adhesion on a greater range of materials. Corona treatment also helps ensure consistent performance of a job across multiple shipments of material.'

Versatility on any press is key and adding a corona treater increases the capabilities of a printing operation. This is particularly important as label printers evolve into converters of flexible packaging substrates. Because the corona treater can be an equalizer when it comes to surface energy consistency, the converter's sales team can seek out new types of business. In many cases the treater can expand the capability of a specific ink formulation.

Says EFI's technical director, 'Corona treatment and digital printing work hand in hand. Due to the non-impact nature of digital printing, corona treatment is one of a limited amount of levers we can manipulate to control output. While a single ink set cannot be formulated to print well on every substrate, corona treatment expands the ink's ability to perform well on a multitude of stock types.'

The importance of corona treating is recognized by ink suppliers as well. When Siegwerk opened a Center of Printing Excellence in Iowa they were

PRE-TREATED DYNE LEVELS DECAY OVER TIME AND CAN BE REJUVENATED WITH IN-LINE CORONA TREATING PRIOR TO PRINTING



sure to include a corona treater on their press. The press is capable of printing with solvent- and water-based inks with both flexographic and gravure technologies. Says Siegwerk senior project manager, Colin Price, 'We find our customers with corona treaters have improved print quality and print density.'

CORONA BASICS

Many OEMS are moving towards the standardization of including corona treaters with their presses. Says Gallus' Bishop, 'We will recommend corona treatment in-line on all presses that will be used to print on films or foils.' Of course, whether you add a corona treater to your press or if it came with one, you still need to know how to operate it.

A corona treating system is designed to increase the surface energy of plastic films, foils and paper in order to allow improved wettability. Wettability and surface energy alone do not guarantee adhesion, but are indicators for successful adhesion.

A corona treating system consists of two major components: the power supply and the treater station. The power supply accepts standard utility electrical power and converts it into single phase, higher frequency power that is supplied to the treater station.

The treater station applies this power to the surface of the material, through an air gap, via a pair of electrodes at high potential and roll at ground potential, which supports the material. Only the side of the material facing the high potential electrode should show an increase in surface tension. The voltage buildup ionizes the air in the air gap, creating a corona, which will increase the surface energy of the substrate passing over the electrically grounded roll.

Once the basics are understood, your operators should become well versed in how to properly measure dyne levels and calculate applied treatment measured in watt density.

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Mandela: how the label industry saved the 1994 election

MIKE FAIRLEY uncovers the extraordinary story of how label converter Self Adhering Products saved South African's first multi-racial election

It is only a few months since the world heard of the passing of Nelson Mandela. An undoubted world statesman, he led the struggle to replace the South African apartheid regime with a multi-racial democracy, emerging from 27 years in jail in 1990 to go on to become the country's first black president some four years later.

Prior to the country's first historic multi-racial vote that put him in office, South Africa had been undergoing chronic political violence. Indeed it was even anticipated that the country could be embroiled in a full-scale civil war during its transition from apartheid to multiparty democracy.

The fact that it was peace that ensued was largely due to the leadership and vision of Mandela – and former president F. W. de Klerk – both of whom were awarded the Nobel Peace Prize.

Mandela emerged as South Africa's unifying figure, a leader in driving for peace in other spheres of conflict and finally, as an elder statesman with extraordinary global appeal.

What is not generally known is that the 1994 election that brought Mandela to the presidency only took place through the momentous efforts of a South African label converter, Self-Adhering Products Limited, who were given just six days to produce 90 million self-adhesive labels so that the additional name of the Inkatha Freedom Party could be added at the last minute to the already printed ballot papers.

Tom McGinley was Self-Adhering Products' managing director. 'Reprinting the ballot papers to add the additional name had been ruled out of the question,' says McGinley. 'Applying a label at the foot of each of the ballot papers was considered as the only viable solution. A total of seven label printers were recommended by the Printing Industries Federation of South Africa, of which Self-Adhering Products was the one that accepted the challenge and won the contract.

'To meet the deadline, staff at the company worked in 12-hour shifts around the clock, even taking meals on the line. For my part, I slept on a camp bed in my office so as to maintain hands-on control throughout production and had little sleep during the six days of the project. Two Aquaflex 5-color presses were used for the job and these ran non-stop for five days, continuously running at 152m/min. New labelstock shipments were made three times each day.

'Constant checking was undertaken during the run, with measurements taken every hour covering production, number of rolls produced, quality, consistency, etc. Indeed, during production we wore out some 14 sets of 120 line plates and 12 cutters, used 270kg of ink and converted 275,000 sq. meters (903,000 sq. ft) of self-adhesive paper into 35,000 rolls of labels.

'The finished rolls were sent straight from the presses by an IEC (Independent Electoral Commission) appointed courier to 11 central points in the nine provinces across South Africa making the logistics of distribution a challenge; the final delivery took place just a day-and-a-half before polling was due to begin. We started shipping to the furthest away, co-ordinating dates, times, courier companies throughout. That we achieved all of this in time was something of a miracle. The labels, which were designed to exactly fit the space on each ballot paper, had to be applied at each ballot station.'

So what can be said about what the company achieved? It was undoubtedly due to the efforts of Self-Adhering Product that the country's first-ever election was able to go ahead on schedule. As Tom McGinley remembers, 'This was a once in a lifetime job, we had to lead from the front, and it was only due to the speed, efficiency and enthusiasm of the company's staff that made the achievement possible as well as the quality and level of support that we received from all our suppliers. Even now, I still believe that the volumes, speed and timescales involved can be regarded as a world record for label production.'

FUTURE CAREER

Tom McGinley went on to run the US and Asian operations for CCL after winding up his own company. Today he is the managing director of Alpha South Africa where he is in the process of setting up a bottle manufacturing plant near the airport in the Johannesburg region a strategic decision for the company to enter the African continent, and the 42nd country Alpha has entered.

As Tom himself comments, 'I have moved over the years from worrying about what goes on the bottle to now worrying about what goes into making the bottle.'



TOM McGinley presents the Self Adhering story mmit.com/africa to delegates at Tarsus' South Africa Label Summit

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Gravure basics at your fingertips

A training course at Hochschule der Medien aimed to provide a practical introduction to the gravure printing process, from galvanics to actual printing. David Pittman reports

Over a three-day period in March, the European Rotogravure Association (ERA) and Hochschule der Medien (HdM) – Stuttgart Media University – welcomed 10 print professionals, plus one journalist from different disciplines and backgrounds to its classrooms to learn first-hand about the whole gravure printing process, from galvanics and the chemistry surrounding preparation and printing using gravure, to the physical engraving of copper cylinders and actual printing.

Hochschule der Medien is a well-equipped educational institute offering practical and theoretical training on a range of processes including screen and flexo printing. For students, this provides the opportunity to get hands-on with different parts of the packaging production cycle, from concept and origination, to printing, finishing and testing/evaluation.

Hardware installed in its classrooms ranges from a 6-color Heidelberg Speedmaster CD 74 to a Fischer & Krecke flexo press and a variety of finishing tools, such as a KAMA flatbed die-cutting unit. Hochschule der Medien also operates a complete gravure printing line with a 4-color Bobst Rotomec MW 60 equipped to carry out production runs with an insetting system enabling production of eight-color jobs, with two metre-long dryers and Bobst's Registron register control. The machine is further equipped with an ESA electrostatic print assist system from Enulec and a 100 percent web inspection system from BST.

This formed the basis of the 'Gravure at your fingertips' course across March 12-14, where representatives from suppliers, converters and decorative printers from around Europe came together to learn the fundamentals of gravure printing. I was lucky enough to be invited to attend the course as a guest of ERA, and to be given the opportunity to 'get my hands dirty' by preparing, printing and analysing a job.

To reach this stage, there was a detailed program of seminars to address the full gamut of the gravure process, from scenesetting market analysis covering global capacities and market penetration, cost and quality comparisons to show that gravure need not be seen as the most expensive print process despite offering one of the better image reproduction capabilities, and mechanical details of how a copper cylinder is produced, galvanized, plated and measured to ensure the correct dimensions and characteristics.

Delving deeper into the engineering principles, Matthias Galus explained how cell size, depth and area define gravure printing, and looked at electromechanical engraving and the variables that must be accounted for when producing an engraved gravure cylinder; the swing of the stylus, the rotation of the cylinder on the engraving unit and the movement of the engraving head along the axes of the cylinder. This was directly compared to the results that can be achieved using laser engraving systems, such as the Think Lasersteam or Schepers Digilas, a version of which is installed at HdM, and their ability to produce fine edges for sharper quality text and images. The group was also introduced to direct laser engraving that can be used to engrave directly into copper.

All of this educational and background information helped the group better understand the principles of gravure printing, although before moving onto the press itself there was still the matter of hand mixing inks from a combination of pigments, additives, solvents and a binder. This highlighted the importance of each component part in the ink formulation and how they influence the characteristics of the inks and their performance on-press.

Once the prepared cylinders and inks were loaded into the press, again by the "students" in order to gain first-hand experience of the mechanics of the Rotomec press, we were able to look at and test a variety of different parameters, such as press speed, ink formulation and varying substrates, to see how they impacted the print results and to compare the theory to what was seen on-press.

The results showed just how much different factors can impact the end result, such as the angle of the doctor blade on the press itself and the composition of the ink, and showcased the precise detail required to ensure variables align to produce the optimum print result.



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The fast-changing world of digital printing

MIKE FAIRLEY introduces a major feature on digital printing, covering all technologies from inkjet to toner, finishing systems and workflow

There can be few in the world of labels that can doubt the impact that digital print-on-demand color printing has had on both label production and label usage over the past 10 years. Indeed, the latest research indicates that in excess of 2,000 narrow-web digital color press have been installed into the worldwide label industry just since the beginning of 2004. In 2013 digital presses made up more than a quarter of all global narrow-web press installations probably nearer 30 percent in the most developed markets of Europe and North America.

What's more, initial forecasts for digital color press installations in the global label industry during 2014 are expected to be approaching or even in excess of 400 machines. Historically, growth of print-on-demand narrow-web color presses during the first decade of the 21st century were predominately of HP Indigo or Xeikon machines, still today's market leaders. More recently however, their continuously growing installed base is being rapidly supplemented by the latest generations of higher-speed, higher quality, wider-web (13 to 14 inch web widths) inkjet presses coming from the likes of EFI Jetrion, Domino, Durst, Stork Prints and Epson.

New digital presses and press manufacturers continue to come to the market. Indeed, there were over 40 makes and models of digital press on show at Labelexpo Europe last year

mostly using inkjet technology, whether UV-curing, UV LED or water-based inkjet. Even more inkjet press models, and several upgraded presses, have been announced in recent months, as well as an ever-increasing range of quite sophisticated digital finishing machines for either in-line or off-line label converting.

Laser die-cutting technology is also gaining more prominence and a wider installed base, bringing with it the potential to economically batch shorter-run jobs both along and across the web. Ever more complex and intricate shapes can be cut with laser, while laser etching and encoding can also be provided at a late stage of production.

What seems certain is that digital print-on-demand color presses will again have a significant platform at this year's Labelexpo Americas, and not just for label production. For the label converter looking to widen his products and services into short-run and niche packaging applications both HP Indigo and Xeikon will also be showing digital carton printing models with complementary carton finishing lines. This will be on top of their extended range of digital label press solutions.

Label converters looking to see what the latest generations of inkjet presses can achieve will be able to participate in a Labelexpo Inkjet Trail in which six inkjet press manufacturers will be printing a range of food, health and beauty, and industrial labels from the same origination, on to the same range of face materials (paper, film and metalized), with the opportunity for show visitors to see the presses set-up and running. They will also be able to collect printed samples of all the labels produced for comparison.

Inkjet has already found increasing application in the printing of industrial and pharma labels. As speeds have increased, resolution has improved, whites have become better, additional colors added, and the quality has become closer to flexo, so inkjet is now increasingly finding a new role in providing shorter-run flexo-like performance in not only industrial labeling applications but also in the personal care, healthcare, wider pharma, DIY and other markets.

No longer a case of should the converter look to invest in toner or inkjet technology, increasing numbers of converters are investing in both. They can be complementary technologies for each other. Toner complements offset quality and inkjet is complementary to flexo printing, both increasing the flexibility of a converting plant to economically print all run-lengths and all kinds of market applications.

Recent brand owner promotions, such as the Coca Cola digitally personalized labels campaign, have also undoubtedly stimulated end-user demand for digital printing. More of these types of promotions are in the pipeline. It's no longer just about printing, but increasingly about what added-value services the converter can offer to customers.

If converters are looking to survive and grow within this fast-changing world of digital printing, then Labelexpo is the place they must look to visit in September.

Digital finds firm foothold in Latin America

LATIN American label converters have been quick to identify the benefits of digital printing and adopt high-end technology from leading suppliers. James Quirk reports

Digital technology may have appeared on the label printing scene later than the likes of flexo and offset, but nowadays it boasts such ubiquity that it is very much a mainstream process. Similarly, though Latin America may be deemed a 'developing market' when compared to the US or Europe, its growth has been such in recent years that it is no surprise to find that the region's converters have been swift in adopting high-end digital technology from leading global suppliers.

Digital label presses are commonplace in Mexico, Brazil, Chile, Argentina and - more recently - Colombia. Your correspondent has also seen them running in Uruguay, Bolivia, Peru and Guatemala. But such has been the process's penetration in the region that machines can be found in even the smallest local markets: right down to Guiana and the islands of the Caribbean (which, though not all strictly part of Latin America, are often handled by Latin American sales teams within the label industry). Indeed, both HP Indigo and Xeikon have reported that Latin America has been the fastest-growing market for their respective digital press portfolios in recent years, with the number of Latin American converters using their machines likely soon to surpass the 200 mark. Inkjet, though newer on the scene, is also making headway; EFI reports 15 installations in the region.

HP Indigo is the undisputed market leader, with more than 150 digital press installations throughout Latin America. Mexico boasts the highest number of the company's presses. Chile, whose highly developed export market has created a competitive local industry, has the highest concentration; ten HP Indigo WS6000s were installed in the country before the first entered neighboring Argentina.

'We have installations ranging from the smallest countries such as Trinidad and Guiana through to all the larger markets, of course,' confirms Alexander Mercon, HP Indigo's market manager for labeling and packaging in Latin America, who covers the whole region apart from Mexico and Brazil. 'We see strong growth year on year in the amount of jobs being printed on our presses: many clients are upgrading to our premium WS6600 presses or adding second or even third machines.'

Compared to similar economies, Latin America is 'without any doubt the leader in HP Indigo digital printing for labels and packaging', adds Ricardo Rodriguez, HP Indigo's labels and flexible packaging segment manager, who covers the Mexico market. The trio, reporting to regional director Fernando Alperowitch, is completed by Thomas Escarião, in charge of Brazil.

Xeikon, meanwhile, reports 30 machines installed in the region; 22 of which have been sold in the last three years, since the Belgium-based company set up a dedicated team and network of distributors to handle the region. Agents are in place in Brazil, Mexico, Argentina, Chile and Colombia, with more to be added soon, while Latin America sales and channel manager Patrick Pitoors leads a team of service engineers scattered throughout the region.

Machines have been installed in Brazil, Chile, Colombia and Mexico, with sales in Argentina, Peru and Ecuador reportedly on the horizon. The company sees potential in the Central American markets of Panama, Guatemala and Costa Rica. A machine has also been installed in Barbados.

Xeikon's Filip Weymans, director segment marketing and business development, labels and packaging, says that Latin America is currently the company's fastest-growing market. 'We had a late start in comparison with North America and Europe,' he adds, 'but what we have achieved in the last three years - setting up a dedicated service organization and distributor network is extraordinary.' Inkjet is beginning to make inroads in the region: EFI Jetrion, for example, reports 15 installations and five more due to enter the market soon. According to Oscar Granados, Latin America channel manager, EFI Jetrion inkjet presses can be found in Brazil, Mexico, Colombia, Peru, Puerto Rico and Barbados.

'The potential in the market is immense,' enthuses Granados. 'Label converters who want to use the same substrates that they use on their existing flexo presses see that capability in our machines. They want to substitute analogue machines for a system which can cover 80 percent of their needs with almost no make-ready time. And given the number of runs of less than 5,000 linear meters, it's a dream that has become reality.'

With the latest generations of digital presses able to handle an ever wider gamut of substrates, both HP Indigo and Xeikon report that their customers in Latin America are increasingly entering new markets.

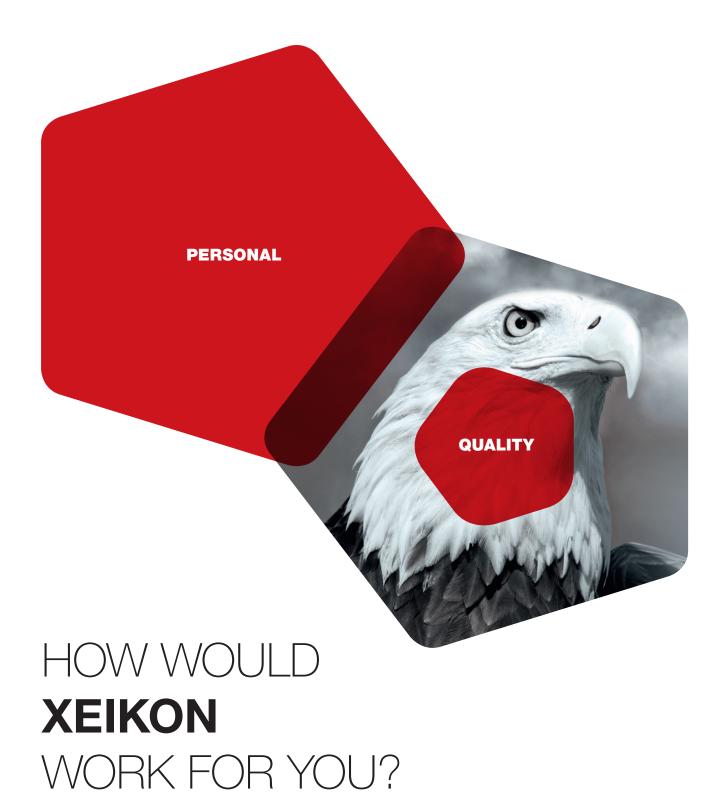
'Initially, the focus remains on their core business, whether labels or cartons, so as to optimize the production process and produce existing jobs more economically. But over time, as their organization understands the digital process fully, we believe that the converters will explore new opportunities within the capabilities of the press,' says Xeikon's Patrick Pitoors. 'We've had conversations with folding carton printers that are looking towards in-mold labels as an opportunity, and self-adhesive label converters who see potential in heat transfer labels.'

'With our WS6000 series, customers can print in a very wide range of substrates without having to change inks or major components – from a thin 12 micron film to a thick 18 pt carton,' says HP Indigo's Ricardo Rodriguez. 'Of course, this covers most of the self-adhesive materials for labels, packaging substrates and shrink sleeves. So we are not only talking about a printing process, but a potential growth path for our customers.

'Indeed, the main trend among our clients is profitable growth. At the end of the day, digital printing means better value for our customers' and brand owners' businesses.'



AT Alphacolor in Brazil, two HP Indigo WS6000s have been upgraded to WS6600s



See the proof. For free.

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Industrial Inkjet Symposium Making inkjet work... for labels

Industrial Inkjet Ltd are hosting their first symposium on using inkjet printing as part of the label production process. Expert speakers from the industry describe how the latest inkjet and accompanying technologies can achieve fantastic results whilst reducing production costs.

This is a one day event and spaces are limited. For more information and to reserve your place, please contact: leannebeattie@industrialij.com.

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Keynote speakers to be announced.

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KONICA MINOLTA





From conventional to digital print in China

CHINESE CONVERTERS spoke openly about the reasons for moving from conventional to digital printing – and the benefits gained – at a recent HP Indigo forum in Guangzhou. Kevin Liu reports

In the digital printing user forum held by HP Indigo at Guangzhou Westin Hotel on March 4, 2014, Mr. Zhang Zhixian, general manager of Wenzhou Yafeng Digital Printing and Mr. Xue Zhitian, general manager of Xiamen Zhisheng Packaging, shared their experiences of making the transition from traditional labels and package printing to digital printing.

WHY CHOOSE DIGITAL PRINTING?

Mr. Zhang Zhixian: Wenzhou Yafeng Digital Printing, located in Long'gang, Wenzhou, the so-called 'Home of Chinese Printing', is engaged in label and package printing. Since our foundation, we have been mainly engaged in package design and conventional printing. After completing the package design for our customers, we need to make print samples for their further approval, which requires a very short lead time but high quality of printed colors.

In 2011 we first saw HP Indigo equipment and it was very impressive, especially the printed colors. We ordered one HP Indigo 5500 and it immediately solved our problems with sample making.

Mr. Xue Zhitian: Xiamen Zhisheng Packaging is an enterprise mainly engaged in labels and packaging printing, and 80 percent of our business is from overseas. Before purchasing the digital equipment, we were mainly using traditional offset printing equipment to produce regular labels and small format cartons.

The reason we bought a digital press, is that many of our

"The reason we bought a digital press, is that many of our clients have been demanding customized printing in the past few years, including variable full color and variable spot color and verification codes"

clients have been demanding customized printing in the past few years, including variable full color and variable spot color and verification codes. We see more and more small orders or orders with complicated layouts, or with increasingly demanding delivery times.

This business is unavailable to traditional printing equipment, and the cost will be extremely high even if we could make it. So we determined to change, in order to meet our clients' requirements. We bought one HP Indigo 5500 in 2012. After installation, this equipment not only met our clients' requirements but also helped us develop much new business.

WHAT CHANGES WERE BROUGHT BY DIGITAL PRINTING?

Mr. Zhang Zhixian: It changed us a lot. First, compared with traditional sample printing, digital printing does not need the process of platemaking and press adjustment. It is very fast,



ZHANG Zhixian showing a digitally printed sample

which saves us tremendously in both printing time and cost. Today we can deliver the finished samples or small orders on the day we receive them, which also brings a better experience for our clients. Besides, due to the excellence of the samples we made, some end users also gave us their small order business. Therefore it not only helped us to keep the original design and sample making business, but to develop new business.

Later, following an increase in orders, Yafeng purchased its second HP machine, the Indigo 10000 digital press. The HP Indigo 10000 inherits all the advantages of the Indigo 5500 and extends the printing width to B2, which fully solves the problems of short-run printing. We can now efficiently produce high quality orders on the HP Indigo 10000 and fulfil the small batch and customization demands of our clients.

Mr. Xue Zhitian: Xiamen Zhisheng purchased an HP Indigo 5500 in 2012. It brings us plenty of benefits. First, its colors have better consistency, which provides customers with high value-added labels including spot color and brand logo colors. Then, it responds very fast. The press could be put into production as soon as we receive the order, so we could provide a better service for our clients. This increases by a huge degree the added value of labels and enhances our competitiveness.

Second, it completes our production capabilities. Now, we dare to receive the small orders which before we were trying to avoid all the time. After the purchase, we transferred many orders previously printed on traditional equipment onto the digital machine, leaving the longer orders for the traditional equipment. From the combination of both traditional and digital equipment, the efficiency of traditional equipment is enhanced, the production process becomes more manageable and work efficiency becomes higher.

Moreover, we developed an internet platform via which customers could place orders over the internet instead of by the traditional ways, such as telephone, mails or fax. This boosts productivity and lowers communication costs.

WHAT IS YOUR BIGGEST IMPRESSION OF DIGITAL PRINTING?

Mr. Zhang Zhixian: Generally, I would like to praise the HP Indigo digital press with three words: fast, accurate, cool. Fast – there's no doubt that digital printing responds very fast, with a fast printing speed; Accurate – this refers to the color. The color consistency is very good. There is no color difference between 10,000 pieces and a one-piece order in different quantities and at different times

Mr. Xue Zhitian: Digital printing develops new business for us, and as a result our sales volume has seen a sharp increase. Though the quantity of business on our traditional equipment is still more than that on our digital equipment, following the installation of our second digital press, an HP Indigo WS4600, the output value of our digital print is growing very fast. In 2013 we saw almost no increase in the sales volume from our traditional equipment while seeing an increase of several times from the digital press. As to profitability, from our statistical data, there has been almost no increase in the profit from our traditional equipment, while the profit produced by the digital equipment is two to three times that of traditional equipment.

WHAT'S YOUR MOST SUCCESSFUL DIGITAL PRINTING APPLICATION?

Mr. Zhang Zhixian: After installation we have continued to explore the capabilities of the HP Indigo 10000, which prints perfect color on a range of printing and packaging materials besides paper, such as PP, PET, PVC, and gold and silver cardboard. We have printed personalized leather-covered notebooks, canvas shoes with patterns in bright colors, and next we will set foot in personalized Mooncake packages. All this work is difficult to accomplish with a traditional press. And some applications are still in development.

Mr. Xue Zhitian: We have a lot of successful examples of digital printing, such as variable spot color labels and QR code labels with verification functionality. Besides this, we have made a lot of special orders for clients. For example, we produced micro anti-fake labels by using the dedicated HP Indigo security printing patterns. We are developing more customized labels which deepen our communication with our clients and changes us from a label producer into a service provider.











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Inkjet wave builds

INKJET represents the second wave of digital label printing technology and is already creating its own exciting ecosystem. Andy Thomas reports

Current predictions suggest inkjet is at the beginning of a steep growth curve, playing into the continued trends towards short run label production as well as its major strengths in the industrial label sector.

Comments L&L consultant editor Mike Fairley: 'Technically we have seen press speeds rising from 45-50m/min, which is now common, to 70 m/min for the latest Kyocera inkjet heads. We can expect speeds to rise even higher in the future, and this is allowing converters to complement their flexo presses.'

Bas Hoijtink, commercial manager graphics & security printing at SPG Prints, sums up the advantages of UV inkjet as follows: 'UV inkjet offers optimum performance on plastics, screen-imitation effects such as high opacity, brilliant shiny colors and raised images, chemical-resistance and faderesistance in sunlight. This makes UV inkjet ideal for numerous decorative and industrial applications, including the no-label look, cosmetics, and warning labels that must provide clear identification, in harsh conditions as well as outdoors, for several years.' The main supplier of UV inkjet heads up to now has been Xaar with its ubiquitous 1001 UV inkjet head technology. So it was of major interest when the company recently launched its next generation 1002 GS6 technology. Among the advances cited by Xaar are improved drop volume uniformity and drop placement accuracy from 1,000 optimized geometry nozzles.

A key benefit of Xaar's Sideshooter and TF recirculation technologies is the ability to print heavily pigmented high opacity single pass white inks and high viscosity varnishes, and this functionality is also incorporated into the 1002 series inkjet heads. Systems featuring the Xaar 1002 GS6 printhead are available now from a number of OEMs including, Durst, EFI, FFEI, INX Digital and SPG Prints.

Epson recently completed its biggest ever investment in inkjet head technology with the development of the PrecisionCore Micro TFP printhead. Further miniaturization and scalability have opened up new possibilities for fluid handling and substrate compatibility, Epson reports, and one of the first products to use PrecisionCore is the SurePress L-6034V, the company's first single pass UV digital label press.

The 4-color L-6034V uses LED-UV cured inks, allowing printing on heat sensitive substrates such as PE. Print speed is up to 15 m/min (49 ft/min) at a resolution of 600 x 600dpi on a web width of 340mm (13.4in).

Options include in-line digital white (L-6034VW) and, significantly, a multi-varnish station allowing jetting of both matte and gloss coatings. Also integrated in the compact press body is a corona treater and an additional UV curing unit.

WATER-BASE

Running parallel with UV inkjet developments is a flourishing market in water-base inkjet technologies.

Memjet has developed the most widely used water-base OEM technology. Its Waterfall technology masses over 70,000 inkjet nozzles per printhead, jetting 1.2pl drops to achieve a native resolution up to 1600 x 1375 dpi at speeds up to 275 ft/min. The inkjet heads themselves are consumable items and current software systems prompt the user when a change is necessary. Memjet technology comes in two flavors for integration into benchtop and high volume-oriented systems. The compact module, where all five colors (CMYK + spot) are integrated into a single print bar, has allowed integrators to develop a range of fast, high quality 'benchtop' printers. These machines, from companies like Afinia, Colordyne, Xante and Trojanlabel, have opened up new markets in full-color ID labels, which previously would have been flexo pre-printed and overprinted with variable data at the point of production.

Of course, Memjet is not the only technology available for fast benchtop systems. SwiftColor recently launched its SCL-4000D roll-fed desktop color inkjet label printer. The system incorporates a static single-pass print head developed by Canon and prints at speeds of up to eight in (200mm)/second at 1200dpi resolution across a 4.26in (108mm) web. The ink cartridges are 240ml capacity tanks and the system print on die-cut, continuous, or reg-marked label stocks. A rewinder is optional.

For high volume applications, Memjet has placed each color on a separate bar, which allows for higher speeds in a more industrially robust solution.

Integrators here have included Colordyne with its CDT 1600-PC press.

Another very successful aqueous technology has been Epson's SurePress L-4033A/W digital label press, with the 100th installation just announced at Japan's Kanae Co., Ltd. Epson says that 20 percent of SurePress customers have purchased two or more units.

The L-4033A is a 6-color (CMYKOG) press, with a white station added to the L-4033AW model. It is a scanning rather than single pass technology, which means printing is relatively slow at five m/ min (16f/min) but with a high resolution across a 330mm (13in) web. The press' resin-based AQ inks will print on film without pre-treatment at 720 x 1400dpi and at 720 x 720dpi on paper.

INKJET CONFIGURATIONS

Digital inkjet systems have evolved to interact with conventional print and converting technology in three principal ways: as add-on units to conventional presses; as hybrid flexo/digital presses; and as digital presses with in-line conventional finishing.

ADD-ON UNITS

It has long been possible to add variable imaging heads to a conventional press for applications such as lottery numbering or security codes. But a new generation of wider, faster and higher resolution inkjet heads now allows the addition of a 'virtual black plate' across the web as well as full color imaging modules.

Examples of VP monochrome units include Domino's K600i, which prints 600dpi at speeds up from 50-150m/min across a full web width. The K600i has seen numerous installations including on a Mark Andy 2200 flexo press at Cool Pak, and at trade printer Discount Labels in the US.

Cambridge, UK-based International Inkjet (IIJ) – which acts as a 'pilot line' for Konica Minolta's inkjet head technology – specializes in integrating its Digital Label Module (DLM) into conventional presses and converting machines. Units have been installed on a range of flexo presses including a Mark Andy press at Lundens Tryckeri in Sweden, on both Gallus and Nilpeter presses and on Focus Machinery's d-Flex hybrid flexo/digital converting system launched at drupa.

'Most of our DLM retrofits are single color,' explains IIJ md John Corrall. 'Converters are using them either to replace a Screen white, or as a variable black plate for late stage customization – less commonly for a spot color. It can also be used to apply spot varnishes and security inks. In terms of width and speed, we are getting into the flexo area, printing at 80m/min on widths up to 600mm.'

IIJ is now developing a UV inkjet module capable of 1200 x 1200 dpi at speeds up to 100 m/min. A concept Colorprint Premium unit was shown running at Labelexpo Europe using LED-cured Agfa inks. It houses two interleaved 600dpi KM 1800i heads to

achieve a native resolution of 1200dpi, printing with a four picoliter drop size.

US company PPSI introduced its Digital Inkjet Color Engine (DICE) UV-inkjet add-on for narrow-web flexo presses back at Labelexpo in 2010. The new version, DICEweb, retains the original's arched roller design but now runs at speeds up to 180 ft/min (60m/min) using an array of Fujifilm Dimatix Starfire UV-inkjet print heads. Other changes include an automated head cleaning system. DICEweb is available in widths up to 20 inches, with up to six colors.

Saxon, Inc of Ferndale, MI was the first label converter to install the DICEweb in January this year on a 2004-vintage Mark Andy 2200 8-color press.

Explains Saxon co-owner Jim Turner, 'We can use the flexo stations to put down primer and clear-coat, and we can electronically register to the die station.'

Last October Colordyne announced its Digital Flexo-bility program, which integrates a Memjet CDT 1600-PC digital imaging unit into a conventional flexo press. The CDT module images at 1600 x 1200dpi, and at speeds up to 49m/min (160 ft/min).

InkJet Solutions, working in partnership with KPG Europe, launched two Kyocera-based inkjet systems for in-line integration at Ipex. The IS1200K water-based inkjet system was printing at speeds up to 80m/min at 1200 x 1200 dpi resolution. It is suitable for use on most packaging films requiring variable date and is approved for indirect contact food applications. The IS600HSK print at up to 150 m/min at either 300 x 600dpi, or 600 x 600 dpi.

Both systems are suitable for in-line use on narrow and mid-web presses. Monochrome and CMYK modules are available, with print widths of 108–540mm (monochrome) and 108–216mm (CMYK).

The MCS Eagle UV inkjet system is designed for incorporation into flexographic and other web presses for applications including numbering, barcoding, graphics and serialization, including support for Data Matrix and HarvestMark standards.

The 600dpi print heads come in 4.25" or 8.5" widths, suitable for multiple lane printing without stitching, and can be combined up to a total width of 25"(630mm).

Imaging speeds are 250 ft/min (63m/min) at 600 x 400dpi and 333 ft/min (84m/min) at 600 x 300 dpi with a variable drop size down to 6 pl. The heads can handle UV-curable or water-based inks, including spot colors. An automated cleaning system is available.

• HYBRID PRESSES

Fully hybrid digital/conventional presses have been around for some time but have failed to make a major breakthrough. Mark Andy was the first to address this market with its now defunct Dotrix-driven DT2200, followed by Nilpeter with the Caslon.

Today a new generation of hybrid machines is emerging led by FFEI, which struck a deal with Edale to build fully modular hybrid presses based around its Graphium UV inkjet platform. The 410mm-wide FFEI Graphium press on show at ipex was printing in CMYK + white in-line with an Edale-designed flexo varnishing, die-cutting and slitting station and an AB Graphic Vectra multi-turret rewinder. The press will be exhibited at Labelexpo Americas although the final configuration has not yet been confirmed.

Now Mark Andy has re-entered the arena with a hybrid flexo/ digital press built around its established Performance Series flexo press platform and a new digital imaging platform which prints up to six colors + white at speeds up to 275ft/min and 600dpi resolution (for a full report see p.20).

Heidelberg has also announced development of a new generation of hybrid digital/flexo presses in partnership with FujiFilm and Gallus (see p.25).

• IN-LINE FINISHING

The increased productivity gained from wider and faster inkjet imaging units has created more interest in in-line finishing,

SCREEN STAR

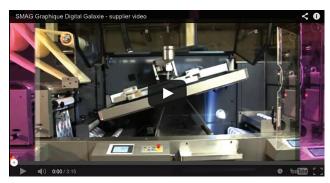
After extensive development work, Screen finally launched its first single pass digital label press, the Truepress Jet L350UV, at Labelexpo last year. The first European installation has just taken place at Springfield in the UK (see p.43) and as L&L went to press the European Digital Press Association (EDP) voted the Screen Truepress Jet L350UV Best Label Printing Solution in the 2014 EDP Awards.

These awards are selected by a technical committee of independent consultants, journalists, and other related professionals, 'based on innovation and the value of the new technologies these products bring to the European market.'

The Truepress Jet L350UV offers print speeds up to 50m/min (164ft/min) on media widths up to 350 mm (13.7in) and incorporates greyscale printheads with a minimum droplet size of three picolitres. The press uses Screen's proprietary HD inks and high-resolution

screening with color management based on Screens Equios workflow. A white ink option is planned, and will be incorporated into the

Springfield press when available.



SEE the SMAG Graphique Digital Galaxie digital finishing system in action at www.labelsandlabeling.com/video including laser die cutting. These modular lines can include any combination of UV flexo/screen coating, varnishing, laminating, cold foil, die cutting, slitting and rewinding, thus starting to blur the line with hybrid digital/flexo presses.

EFI was one of the first machine manufacturers to offer a digital press with full in-line finishing as a standard option. Its CMYK + white LED-curing Jetrion 4900 ML UV inkjet press is equipped with in-line Spartanics laser die cutting, allowing converters to go from file to finished product in a single pass. The press operates at speeds up to 70f/min in five color mode (CMYK + white) with a high speed 120f/min mode on a web width up to 229mm (nine in) and image area up to 210mm (8.3in) wide. The press is allows access to UL pre-certification on select substrates.

The Stork DSI digital press was also available from the outset as an in-line press with modular finishing section supplied by ABG.

At the opening of its demo/R&D center in Cambridge, UK, Domino demonstrated a full production line which runs from an N610i digital press to ABG turret rewind The company's Jon Pritchard commented at the Labelexpo Europe launch of the N610i: 'Given the speed of this press at 75m/min (246ft/min) I can't see why somebody would not want in-line finishing.'

INX is another Xaar integrator which has gone down the in-line finishing route. Its NW140 UV digital narrow web press was demonstrated at Labelexpo Europe running in-line with a Spartanics X-140 laser station at speeds of up to 80m/min.

The NW140 UV is an interesting machine, mounting 14 Xaar 1001 printheads with the capability of jetting in one pass a pre-coat, white, CMYK and clear varnish. The system employs an air-cooled UV-LED pinning system from Integration Technology and Phoseon FireLine 225 water-cooled UV LED as

DICEweh



Go Hybrid – Add DICEweb digital color to your flexo press!



The second-generation **DICE***web* inkjet engine adds up to 6 colors of high-quality digital printing in-line with your existing flexo stations and tooling – and prints at speeds of 160ft/min or more. Compatible with almost all flexo presses, **DICE***web* allows you to offer same-day service on short-run work, with no plate-making or make-ready, perfect registration, and the ability to add variable data and barcodes.

For more information, or to request print samples, email info@prototypesys.com , call (763)-557-9348, or visit www.prototypesys.com/L&L. a final curing station. The press prints at standard Xaar resolutions across a 5.5in print width.

WIDER WEBS, WIDER GAMUTS

A major UV inkjet trend is towards extended gamut inkjet printing, where CMYK stations are augmented by orange, green and violet.

One of the first manufacturers to offer this possibility was SPG Prints' DSI UV-inkjet label press, which offers up to 10 'slots' for inkjet modules. Converters can start with a basic CMYK configuration then add additional modules for orange, green, violet or white, or even a digital primer to remove the need for pre-coated substrates. Adding orange and violet, for example, enables the press to cover 90 percent of the Pantone color gamut.

The DSI also exemplifies the shift to wider inkjet press widths. Already we have seen a general move among the UV-inkjet manufacturers towards 'flexo standard' 330mm/13in press widths to make the machines compatible with existing flexo tooling. The DSI press can additionally be built in 400mm or 530mm configurations.

Other UV inkjet manufacturers offering extended gamut systems include the Durst 330mm (13") 7-color Tau 330 UV inkjet press.



EFI Jetrion 4900ML UV inkjet press with in-line laser

Domino is among suppliers announcing future availability of extended gamut inks. On the water-base side, Memjet offers a fifth imaging head for a special color.

FOOD CONTACT AND MIGRATION

One reason UV inkjet has been targeted primarily at industrial applications is the lack of true low migration and odor inks. Durst, however, recently announced a major breakthrough. The company has built an inert gas system built into its flagship Tau 330 web press, claimed to make printed samples almost undetectable from an olfactory point of view.

Durst uses Sunjet's Low Migration UV inks for this application, claimed



Graphium offers converters unparalleled flexibility and productivity, enabling them to accept complex projects requiring a wide gamut of colors on virtually any substrate.

A true hybrid digital press supporting up to five digital color modules and six flexo stations Graphium offers the unique capability, from a vendor, of being able to integrate optional flexo and finishing stations inline for conversion in a single pass reducing production time and cost in comparison to traditional offline finishing.



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to meet the guidelines set out by the European Printing Ink Association (EUPIA), the Swiss Ordnance and Nestlé's Packaging Inks Specification.

This opens up applications for the Tau press in primary food and pharmaceutical labels, and packaging items including yogurt lids, blister packs and bottle seals.

IJ has been carrying out a lot of work qualifying low migration ink systems. 'Low migration is not just a question of supplying the right inks,' explains John Corrall. 'The whole print system has to be built and certified LM before the final customer will give approval,'. IJ is also working on a number of flexible packaging projects which will use LM inks.

For Memjet, migration issues are similar to those for water-base flexo inks.

COATING REQUIREMENTS

A key advantage of UV inkjet is that it does not require surface pre-coating for inks to adhere. However, to guarantee color consistency it is now recommended that a pre-coated label stock is used, and the major PS materials suppliers are already qualifying their labelstocks for different brands of UV inkjet press.

Memjet technology provides a different set of advantages and challenges. The inks have similar characteristics to water-base flexo inks, and unlike surface-curing UV inks need to sit below the substrate surface. This means that most papers can be used without a coating. Films, however, will require a dedicated coating which will absorb the inks, and these are now under development by companies like Avery Dennison.



METALLICS

UV inkjet has not yet been able to develop a convincing metallic ink, which requires larger, more abrasive particles, but there are alternative routes for producing metallic effects.

'Digital cold foil' involves jetting a patterned adhesive onto the web, effectively replacing a flexo adhesive plate. The cold foil web is laminated to the web and

MIKE FAIRLEY UPDATES DIGITAL PRINT BOOK

This feature looks at the main trends in the inkjet market, but for a more in depth guide to digital press technology, finishing, materials and business strategy, readers should consult Mike Fairley's new Digital Label and Package Printing book, now available from Amazon.

TROJAN INTO BATTLE

As L&L went to press, Trojanlabel announced the launch of its first high volume Memjet-driven digital press.

'We witnessed a very strong pull from small to medium sized label converters when we launched TrojanOne due to its affordable pricing,' states Mikkel Wichmann, CEO for Trojanlabel. 'The product was not designed for heavier volumes and thus we were reluctant to sell it to label converters and printing houses. However this is completely changing with the introduction of the TrojanTwo.'

The TrojanTwo 'is the first serious attempt to offer the market an affordable mini digital press, which has the characteristics of the larger and more expensive systems,' says Wichmann. The press run at speeds up to 18 m/min at 1600 dpi. The unit is

The press run at speeds up to 18 m/min at 1600 dpi. The unit is expected to sell at 35,000 USD for a complete installed unit, and will be released during the summer.

Operationally, TrojanLabel is a unique company, with 'innovation nests' in Denmark, Hungary and Dubai and production facilities in China to keep production costs down.

rewound in the usual way.

Another recent development has seen Color-Logic – developer of the Process Metallic Color System – announce technology partnerships with Durst, for its Tau 330, and for Domino's N610i.

Jon Pritchard, product manager at Domino Printing Sciences, comments: 'The ability of the N610i press to print on metallic substrate, and the ease with which the Color-Logic software cuts white ink masks and permits graphic designers to specify the precise metallic color they desire, are an unbeatable combination of technology. We expect our new hardware offering to benefit greatly from this relationship.'

Helmuth Munter, segment manager for Durst Labels & Package Printing, shares Pritchard's enthusiasm: 'Our partnership with Color-Logic ensures that Durst customers using the Tau 330 label press can successfully implement the latest in metallic label technology. Durst has tested the Color-Logic system in our laboratories and we are convinced that the process produces the highest quality printing on metallic substrate.'

PRINTING FILM

UV inkjet is emerging as an excellent technology for converting unsupported films, and more presses are now being equipped with soft tension transport, corona treating station, chill drums with digital white for printing on clear films.

Stork's DSI now incorporates a chill drum as standard, and at its recent Open House Domino demonstrated for the first time an integrated chill drum on its N610i digital color press. Durst also an optional chill drum for its Tau 330.

Meanwhile the development of LED-UV curing systems should allow handling of heat-sensitive materials such as PE without requiring a chill drum.



SCREEN-TRUEPRESS-JET-L-350UV-A

Toner technology holds its lead

TONER systems remain the dominant choice for digital label printing, and the leading proponents continue to move the technology forward. David Pittman reports

Despite the rise of inkjet, toner remains the dominant digital label printing technology. It is present in a wide range of OEM print engines from full production to benchtop scale, but the leading proponents by far remain HP Indigo and Xeikon.

HP Indigo has the largest number of digital press installations and continues to develop its 'third generation' narrow web WS4600 and WS6600 press technology, with the new WS8600 generation to be launched at Labelexpo Americas (see news starting p10).

At Labelexpo Europe last year the company launched a silver ink and an enhancement package for the WS6600 including version 4.0 of the SmartStream Labels and Packaging Workflow Suite, HP Indigo Print Care 2.0, a new set of consumables and a high-slip white ink for shrink sleeves.

HP Indigo's fourth generation presses, the 20000 and 30000, are now entering the market after a number of years of development and testing. At the recent Interpack show, the 30in-wide, roll-to-roll 20000 press, designed for producing a diverse range of products including flexible packaging, labels and shrink sleeves on film or paper from 0.4-10pt thickness, was officially launched.

Prior to this, HP Indigo had installed the press at five beta sites in the US, Europe and Asia. Since the release, further presses have already been installed in Japan, the US and Switzerland, for applications including food packaging, labels and even posters. Several more customers are waiting for their presses to arrive.

The 20000 addresses market trends towards SKU proliferation and shorter run lengths. It has seven on-press ink stations enabling converters to meet the most stringent corporate branding requirements, using HP IndiChrome Pantone-approved on-press four, six and seven-color emulations, and off-press mixed spot inks to achieve up to 97 percent of Pantone colors. It can print color jobs at up to 137 linear ft/min in enhanced productivity mode (EPM), which eliminates the black separation in 4-color process printing.

The 20000 is designed to handle the majority of flexible packaging applications with either surface or reverse printing. Converters can prime materials in-line, meaning they can use existing material stocks, and the press' industry-standard print width allows existing converting equipment to be used.

The sheet-fed 30000, with a slightly smaller 29in format intended for folding carton printing, has also begun making its way to customers, who are producing a large variety of folding cartons for a diverse range of vertical applications, including pharmaceuticals, cosmetics, FMCG and more.

Interestingly, HP reports that commercial printers with 10000 sheet-fed presses are also using the machine to produce cartons, demonstrating a pent-up demand for short run and variable imaging work.

XEIKON

Xeikon also continues to move its toner technology forward. The company's strategy has been to launch 'suites' focused on core markets such as folding cartons, heat transfer and in-mold labels.

New technologies include ICE toner, launched at Labelexpo 2013, which allows the press to handle heat-sensitive substrates including PE facestock and thermal labels.

Germany's bsb-Label and Eleftheriades in Cyprus are already using ICE and reporting positive results.

Further dry toner advances include the availability of off-the-shelf gamut extension colors, orange, blue, red, green and EXTRAmagenta, that enable printers



HP Indigo said the 20000 meets the growing market demand for versatility in labels and packaging to make use of a broader color gamut than CMYK for the specific orange color in chemical labels, for example. Xeikon has also set-up a new program that allows customers to order unique spot colors in both QA-I and ICE toner versions.

Xeikon's Filip Weymans says PS label converters are now using digital printing to target value added markets. 'Denny Bros, for example, recently bought a 3500 model, and it will be using it to produce booklet labels and more complex constructions.'

XEROX

Xerox has up to now played mainly in the commercial print market, but its xerographic iGen4 press has made a significant impact in the digital carton sector. The iGen4 has a rated speed of 110ppm, and can print on coated or uncoated substrates, a variety of labels stocks and typical packaging boards and papers. It can be integrated with coating and die-cutting equipment, such as the Tresu Pinta coater and KAMA DC 76 die-cutting unit.

Hamidah Mansor, business manager for packaging at Xerox, notes that the pharmaceutical market has been one of the most receptive of the iGen4 due to its maximum media dimension of 14.33 x 22.5in.

'Xerox is very much looking to engage with the packaging market,' states Mansor. 'The iGen4 is our flagship product in this area leveraging established technology from the commercial printing market to capitalize in the growth potential of digitally printed packaging, especially folding cartons. The iGen4 is also used by some customers to print sheet-fed labels.'

Does Xerox have plans to add a roll-to-roll option to take the press into the mainstream PS label market? 'It is possible, but we need to look at the market and the way it is developing, and where we can leverage our technology most effectively.'

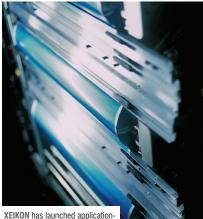
TURNKEY SYSTEMS

Allen Datagraph Systems uses LED- toner technology in its two latest digital label systems, the iTech Axxis HS and iTech Centra HS. Both are offered as complete turnkey systems that enable label converters to digitally print and finish smaller quantities of consumer-quality labels.

The iTech AXXIS HS is a tabletop digital printer capable of producing high-quality labels and consists of the roll-fed Axxis HS – a CMYK print engine using LED toner

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XEIKON continues to invest in its technology and supporting equipment, such as the 3500, with suites and new toner types



XEIKON has launched application specific dry toners, such as ICE

technology – and the Axxis HS digital label finisher.

The roll-to-roll Axxis HS images at 1,200 x 600dpi at speeds up to 7.6m/min. With a maximum width of 216mm, the printer has a wide degree of substrate flexibility that does not require top coating. The Axxis HS prints on most standard pressure-sensitive paper substrates, along with white or clear films.

The iTech Centra HS combines the Centra HS engine with the Centra HS digital label finisher. Like the Axxis HS, the Centra HS is an LED toner printer imaging consumer-quality labels at 1,200x 600dpi, but at faster speeds up to 9.1 m/min with a larger maximum width of 327mm.

The roll-to-roll Centra HS finisher is similar to that of the Axxis HS, although it can convert label substrates from 127mm to 355mm wide.

Included with all iTech HS series printers is a Wasatch SoftRIP, which includes a full suite of color controls – ICC color management, tone curve reproduction and spot color replacement features. The SoftRIP internally produces 36,000 process tints for spot color matching and also has an on-board label cost estimating tool. It can also maximize substrate use to minimize waste. The variable data print option enables sequential numbering and barcodes along with graphic elements.

Primera Technology's toner-based CX1200 also delivers short-run, full-color digital label printing, which it has worked to enhance by increasing the capacity of its cyan, magenta and yellow toner cartridges.

CMY toner cartridges for the CX1200 previously were rated for 15,000 ISO pages at five percent coverage. Now, all new shipments of toner cartridges are rated for 16,500 ISO pages – an increase of 10 percent. The price of the cartridges remains the same as before, and they are now available through Primera in the USA and Canada, Primera Europe in EMEA countries and Primera Asia Pacific.

Says Mark D. Strobel, vice-president of sales and marketing at Primera Technology, says: 'When we surveyed our users and asked what we could do to improve the CX1200, a reduction in the cost per label was the number one request. We listened and reacted as quickly as possible.'

The CX1200 can print at 16.25ft/min in CMYK with a print width up to eight inches. Print length is rated at up to 1,250 ft per 12in roll of self-adhesive labelstock, including face sheet, adhesive and liner.

OKI's color print engine is used by a number of OEMs in their technology, but the company also has its own proColor digital print system, including the C711DW digital web press. This model prints labels up to 25ft/min (7.6m/min), full-color cut sheets at up to 34ppm, and permits printing on continuous–fed media or cut sheets, up to 8in-wide – on industry-standard facestocks, paper, synthetic and adhesive-backed substrates. Print resolution is 1,200 x 600dpi.

OKI's pro511DW digital web press can prints tags and labels up to 30ft/min (9.14m/ min) or full-color cut sheets at up to 36ppm. Print resolution is, again, 1,200 x 600dpi.

iSys Label's Edge 850, 4-color, single-pass LED benchtop label printer also offers a print quality of 1,200 x 600dpi with a printing speed of up to 9.14m/min (30ft/min) and can print on a variety of substrates: self-adhesive label stock, die-cut label stock, tag stock, approved films and approved synthetics.

Printing 2up at a size of 4 x 6in (101.6 x 152.4mm), the Edge 850 can produce 25,120 Labels in four hours or 50,240 in eight.

iSys Label says this makes the Edge 850



XEROX'S iGen4 is primarily used in the pharmaceutical packaging market but has label applications also.



ideally suited to the variable data requirements of beverage, food and consumer product label printing.

Its Apex 1290 offers similar performance characteristics to the Edge 850, but with larger capacity toner cartridges and media spools, and the ability to cut on the fly. Its productivity is considerably greater than the Edge 850, and when printing labels 3up at a dimension of 4 x 6in (101.6 x 152.4mm), the Apex 1290 can print 37,680 labels in four hours and 75,360 in eight.

PARTNERSHIPS

Both HP Indigo and Xeikon have partnered with a wide range of industry suppliers to target a wide range of label and packaging applications.

HP Indigo partners include Esko for front-end technology, and AB Graphic and Comexi in the finishing arena. The Digicon 3000 by AB Graphic in partnership with Edale, enables one-pass label production, and had additional abilities for solventless and water-based lamination. The Comexi L20000 is a water-based laminator designed specifically to work with the HP Indigo 20000 to achieve environmentally friendly, fast time to market laminations with high performance bond strength. The L20000 will be commercially available early next year.

Partners present at the most recent Xeikon Café event included 3M, AB Graphic, Actega, Bograma, CERM, Chili Publish, Highcon, Hybrid Software, Iggesund Paperboard, KAMA, Labeltraxx, Meech, Michelman, RotoMetrics, Squid Inks, Stora Enso, Treofan and UPM, and its presence at Ipex 2014 was tied in with digital cutting specialist Zünd, which was converting cartons printed on a Xeikon 3500 press with its S3 digital cutter.

These partners are intrinsic to Xeikon's family of application-specific suites, which includes an in-mold label suite, self-adhesive label suite, heat-transfer label suite and folding carton suite, which are designed as integrated ecosystems to print and convert different jobs.

Digital Finishing

THE INCREASING INSTALLED BASE OF DIGITAL PRESSES has created a new industry in dedicated digital label finishing machines, including in-line lasers. Danielle Jershefske surveys the technology

As the installed base of digital presses has increased, the debate around in-line versus off-line finishing continues. More than 80 percent of the global installed base of production series digital presses finish their labels or printed packaging off-line. Generally, this is because of the mismatch in speeds between press – traditionally slower than digitized analogue systems – and finishing equipment. With the new generation of faster and wider digital presses, however, finishing in-line is becoming more feasible.

The main focus of dedicated digital finishing lines is not only to varnish, laminate and die cut, but also to add value to the digitally printed label through a range of embellishment options. To this end, most digital finishing systems are modular and can be added to as the converter's needs change. These systems, when off-line, are often used to process conventionally printed labels as well.

A-Z ROUNDUP

AB Graphic International is set to launch the latest edition of its established Digicon digital label converting lines at Labelexpo Americas. The Digicon Series 3/RL label converting line is equipped with unwind corona treater controlled via its main screen, flat bed foiling and semi-rotary (full rotary option) flexo application system. Rail mounted over-laminating for foils or laminates, flat-bed screen printing unit, semi-rotary die cutting, plate mount and I-Score automated back scoring complete the specification.

The company has also developed the Digicon 3000 label converting line for 30inch webs. The system is designed for short runs and can be supplied to complement any 30inch wide digital press installation to enable finishing on a wide range of label substrates.

The finishing system specialist has now implemented its JDF/JMF software on the Digicon, Omega and Digilase converting lines. The software connects the equipment with the pre-press MIS system, enabling automatic set-up of job parameters. The JMF software enables information to be sent back from the finishing line to the MIS system, including details of material waste, machine status, label count, web speed and set-up times.

The Matrix Modular Digital Finishing System from Aztech

Converting Systems is a flexible and expandable finishing platform. The base system configuration is equipped with a 40inch unwind, a LasX LaserSharp 400watt laser, waste winding, and 26 inch finished roll rewind. The system is available in 10, 13 and 18inch web widths and operates at speeds of up to 500 fpm. Additional process stations can be added to the base system framework.

Aztech's digital finishing and converting line also includes the DieMaster Series, a modular rotary die cutting system with servo web control for registering to a pre-printed web.

Both of the Colordyne Technologies (CDT) models, the 1600-PC Laser Pro (with in-line Las-X laser die cutting station) and CDT 1600-PC Rotary Pro, offer in-line lamination and UV or aqueous (AQ) coating stations. These current models are configured to flood-coat UV- or AQ-based varnishes cured through either its hot air dryer or GEW lamp system. CDT offers traditional rotary finishing features on the CDT 1600-PC Rotary Pro model. The Production Class Series also has the ability to sheet and convey for roll-to-sheet applications, such as shelf talkers, hang tags, forms, sheeting labels, and wristbands. Additional options offered on the CDT Production Class systems include underside lamination, and slit and dual rewind capabilities.

Berkeley Machinery offers the Apollo range of off-line converting units including the Apollo SRD-SX330, which has die cutting, hot foil, cold foil, lamination and other features available to meet specific finishing requirements.

Cartes provide s modular finishing with its GT360 Series, which is configurable with hot stamping, silk screen printing, embossing, flexo varnishing, flat and laser die cutting. The Cartes GT360 Series machines come with a web width of 360 mm and can run at up to 15,000 cycles per hour, either in-line or off-line. Each printing unit works as an independent module, making it possible to invert, replace or add units irrespective of the original machine configuration.

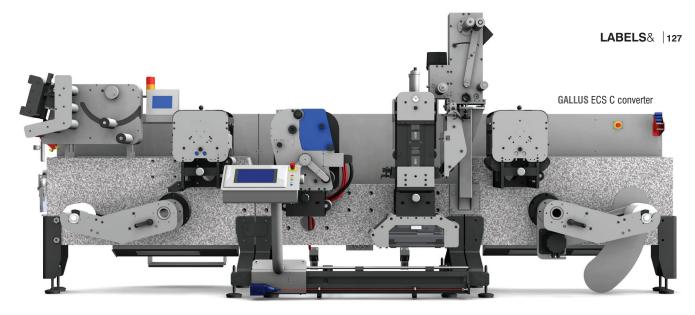
Delta Industrial's Delta Mod-Tech finishing systems offer the flexibility to die cut and coat digitally printed webs in-line with a digital printer or off-line as a stand-alone finishing system. Modules include, but are not limited tojumbo unwind, line guide steering, splice table, lamination, flexo printhead, UV curing, accumulator, semi-rotary die cutting, servo driven matrix pull



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DELTA Converting Mod Tech system



nip, RD score unit, crush cut slitter and differential rewind.

Now available from Gallus as part of its hybrid conventional/digital print and converting program, the ECS C digital converting system has been developed to handle the output of up to two highly productive digital presses,

Based on the Gallus ECS 340 'granite' press chassis, the ECS C features a format-free die cutter. Changeover times and waste have been reduced by front loading, a sleeve system, chambered doctor blade, presetting and a short web path.

Rotatek has announced a unique development – an offset-based digital converting line, Digitalis, which combines semi-rotary and full rotary finishing in a 400mm-wide format (350m print width). The Digitalis also includes hot Stamping and silkscreen modules. The full range of Digitalis modules includes offset, flexo coating, flatbed screen, hot and cold foil stamping, embossing, die-cutting, lamination and sheeting with stacker. The unit operates at speeds up to 150m/min in rotary mode.

Grafisk Maskinfabrik has developed the compact DC-500mini converting and finishing unit for use with digital printing presses, with a footprint of just three by one meter(six by three ft). The DC500mini can be set up as an in-line extension to a digital press or as an offline converting and finishing unit – and even as a printing press for specialized value-added products.

The line includes varnish, semiand full rotary die cut, slit and dual rewind stations, with options including lamination, corona, web clean, backscoring and razor slitting. The UV flexo varnish station has optional registration for spot varnish. Print-to-cut registration is achieved in one rotation, with no station movement or mechanical setup required, says GM. Repeat lengths are adjustable from two to 22.5in and line speeds up to 40m/min.

Grafotronic manufactures the entrylevel Digital 380CF, a compact servo digital finishing machine equipped with a flexo printing station, semi-rotary diecutting and slitting. The modular concept allows users to add printing units, cold foil, rotary die-cutting, semi-turret or a sheeting unit at any time.

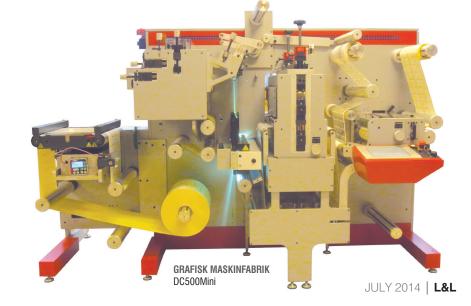
Primera's FX1200 Digital Finishing System has undergone major firmware upgrades, delivering improved vector compensation tension control on input, output and lamination rollers, improving the overall smoothness and consistency of each cycle. Another significant change is in cut and/or perforation control. For example, if a customer produces chapstick labels, the machine now allows for perforation inside the label. The FX1200 can also now make internal cuts to a label. For instance, if a user's label is the shape of a doughnut, they can cut out the internal circle, or 'doughnut hole', in addition to the outer edges.

The SMAG Digital Galaxie digital finishing machine includes a range of add-in modules, including semi-rotary or flatbed foiling, embossing, flatbed screen, lamination and cold foil and 100 percent inspection in co-operation with AVT. The Digital Galaxie system is based on Smag's Galaxie press base, with a running speed up to 45 m/min and a maximum web width of 350 mm. Smag believes flatbed screen technology is an ideal match for digital print because of reduced tooling costs and tooling interchangeability with conventional presses, as well as its ability to combine with multiple effects such as foiling and embossing. Smag also has a module to prime materials inor off- line.

Smag's silk screen technology can bring added value to products, including matte inks, tactile and thermochromic effects. The machine is now able to receive JDF information for improved automation, to reduce waste and set up.

Launched in the last year are the high speed flatbed screen (SGV) and high speed flatbed foiling (HGV) modules, both running up to 30 m/min.

Xeikon has developed the DCoat in-line processing system, available in widths of 330 and 516 mm. The DCoat provides UV varnishing, laminating, die cutting, slitting and a double-spindle winder. Optional modules for blanking UV varnishes and alternative winding units are also available. The supplier also offers the MiniCoat 330, a compact processing system for in-line or offline material conversion. It can also be equipped with optional edge cutting and other cutting functions.





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Solvent-Free, High Speed Processing

There are high costs associated with solvent processing: the equipment, specialised air-conditioning & extraction and solvent recovery. Whilst there have indeed been alternative technologies available, quality has been a significant issue, until now. Dantex's Aquaflex plate range is achieving a print quality in flexible packaging that is successfully challenging all other current options. Consider the immediate and long-term impact on the environment the elimination of solvents and the introduction of high speed processing will have; a high quality, cleaner and greener solution for the Flexographic Printing Industry.





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Enhancing workflow in a digital printing plant

PROFITABLE DIGITAL PRINTING is much more than just investing in a new press. It's about changing the way the business is managed, the automation of business systems, the creation of a seamless workflow, and changing the roles of sales and marketing. Mike Fairley assesses the impact of digital printing on the digital plant

Label converters invest in a digital printing press for a variety of reasons. It may be to reduce costs while improving margins, so as to be more competitive and profitable on shorter runs. It might be because they want to be more innovative and are looking to offer their customers an added-value solution or service that may include personalization, versions and variations, sequential coding or numbering. It could be that they are looking to widen or complement their existing converting capabilities. Perhaps they are just aiming to meet the changing market, technology and production demands of their customers.

What many converters that have moved down the digital label printing route soon find out is that investing in a digital press is only one of the first steps towards becoming a successful and profitable digital label converter. Indeed, it is far from just being about digital print; it also involves other print manufacturing and management techniques, from pre-press and origination to color management, through enhanced workflow to more sophisticated management information systems.

The challenges – and opportunities with digital printing technology are about widening the converters' capability and how to offer a new level of service to customers. It is about broadening the range of solutions and providing for a broader range of printing techniques. In simple terms, it is all about enabling converters to better meet their customers' changing market demands.

Indeed, one only has to look at market trends in recent years to soon understand the considerable, and sometimes quite dramatic, market changes that have impacted on brand owners and retail giants – and in turn on their label suppliers. Take globalization for example. For brand and retail groups this has created a need for more:

- Different language versions
- More ethnic and country variations
- More SKUs

Such developments have had a major impact on their brand to market operations, and on the way they specify, manage and buy their labels and packs – as well as substantially changing the pressures they have on their supply, management, production and information chains.

From the label converter's perspective, this growing complexity in the brand owner's business will in turn increase the complexity of running and managing their own marketing, sales and production processes, and in managing the sheer amount of information that will need to be handled.

Put all this together and looked at from the label converters' point of view, the impact of globalization by their customers will almost certainly mean more time spent in liaison and feedback, more management decisions, more design and color changes, more color management, more origination, more complex workflow and more customer liaison.

Investing in a digital press is therefore often only the first step in building a successful digital business. Investment may also be required in the press-press department, in a more sophisticated Management Information System (MIS), and in building an automated, integrated and more sophisticated and seamless digital workflow that offers:

- Improved production efficiencies
- A reduction in errors
- Faster and more accurate workflow throughput
- A quicker response
- Overall cost and waste reductions
- Enhanced management information
- Better customer information

Quite simply, a seamless automated workflow and what it can provide for customers' needs to become part of the label converter's sales message. It will lead them to a different way of working. A different way of thinking when introducing digital.

Certainly one of the key messages that frequently comes across when successful converters talk about their digital printing operations is that 'when you make the transition into digital then you should take the opportunity to stand back and re-think how you do business.'

Undoubtedly, an automated prepress and business workflow is one of the keys to maintaining profit levels, whether digital or conventional printing. While prepress may be simpler for digital, it does need to be automated using an in-house developed software capability or through the use of one of the currently available MIS software packages, such as LabelTraxx, CERM or EFI Radius.

With digital largely being about fulfilling short runs, this in turn creates more small orders to fill press capacity. More small orders and the number of unique SKUs that the label or package printing converter needs to deal with then means more estimating, more order entry and more administration - and the potential for more prepress production bottlenecks, from the duplication of information going to prepress, more proofing activities, managing multiple versions, the storing of specifications for many more products, the requirement for cost-efficient layout and submission of items going to press, and scheduling pressures. There is also the requirement to integrate JDF with digital press front ends

In short, the whole pre-press process becomes dramatically altered once digital is introduced into the printing plant. Instead of the printer focusing on color separations, plate preparation, trapping, etc, the whole administration and production process becomes an intensive file processing function with many more artwork files than the converter is normally used to dealing with in conventional printing. This key difference in approach has undoubtedly caught many printers out when moving to digital. Quite simply, they fail to understand (or prepare for) a fundamental shift to an entirely new prepress workflow and the associated increase in volumes.

A key message therefore for all label and package printers moving into digital printing technology is to automate production and integrate pre-press with business systems so as to be able to cope with lots of short-run orders. This will enable profit levels for both digital and conventional printing to be maintained.

Many label and package printing companies investing in digital printing for the first time may of course already have a pre-press system, such as Esko. They are therefore looking to understand whether the same equipment and process can be used for digital printing as is used for conventional. Also, what is the role of pre-press in digital?

One of the reasons why printers/ converters invest in digital is because they want to diversify. They want to be able to deal with the shorter runs, to be able to provide a hybrid solution, to diversify their product range, to avoid becoming a commodity business. So where does pre-press come in with the conventional and digital printing operations? Well, in basic terms, pre-press offers a lot of opportunity to drive cost out of the whole process.

In a hybrid workflow for example, complexity is pretty high. The converter needs to have, to a fair extent, to try and reduce the risks of an operator making an error. An error of applying wrong trapping, wrong features or wrong step and repeat, wrong legends and which is good for proofing. All of these things can use a lot of overhead cost in the final product – and that's where margins can disappears. Pre-press is therefore very instrumental, certainly in a digital world, in keeping costs under control and in ensuring production efficiency.

If a printer/converter already has an Esko system for his conventional printing he is already in the right place to start his digital operation, but what they do need to look at is how far they can further automate the workflow.

Workflow automation is an area that is constantly progressing and is undoubtedly an area where a lot of benefit can be found. Certainly if you talk about postponement of the job, the decision to go either conventional or digital, and then digital – what kind of digital, which press – then automation is a very important factor in reducing the risk of the operator making an error, and it should ideally be seamless.

Looked at in this way, a seamless and fully integrated digital workflow will eliminate plates and plate-making stages, minimize press running wastage by printing exact quantities, cuts out ink colour matching, provides instant job changeovers without registration problems or press downtime and provides a greater production flexibility – particularly beneficial if there are many versions, variations or language changes.

Managing a successful digital label or package print plant will almost certainly create more information to be processed and handled, require better customer communication, speedier access to information, a need to work smarter, to enhance consistency from estimating to processing orders and, perhaps most importantly, to cut time and costs for greater profitability. This all leads many digital label and package printing companies to review and install or upgrade their management information systems.

Certainly, when looking at the issues around digital label and package printing the cost of administration is usually seen to be a higher portion of the overall cost. Therefore in order to maintain, indeed improve, profitability, the focus must be to reduce costs by streamlining the administrative process.

Looking at MIS and successful workflow

and job automation there are a range of tools available. These include:

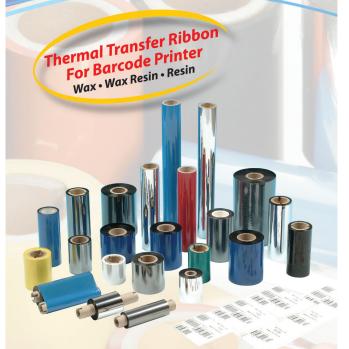
- · Web estimating and ordering
- Cross-over analysis for estimating (to go digital or conventional)
- MIS integration to pre-press
- Integrated online product approval
- File planning (to semi-automate frame layout)
- Managing semi-rotary and rotary die inventories
- Managing the movement of un-primed stock to digitally primed stock in inventory
- JDF integration with digital front-ends

At the end of the day MIS and workflow automation in the digital plant should be used to cut time and costs and to work smarter. It should provide quick access to information plant wide; offer better customer communication (from first contact to order to on-going contact; provide more consistency from estimating to processing orders; give access to industry best practices and, above all, provide greater profitability.

As previously stated, 'making the transition into digital printing gives a label or package printing converter the opportunity to stand back and re-think how they do business.' Digital printing does indeed involve making changes to the way that the business is managed and run; in who is empowered to make decisions; of increasing administration and process automation; of investing in MIS; in changing the way that sales and marketing function.

Get it correct, and the digital label and package printing business will undoubtedly become a more successful – and more profitable – business in the future.





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DON Nolan of gold sponsor Avery Dennison gives the keynote presentation at Label Summit Latin America 2014

Colombia hosts recordbreaking Label Summit

WITH 747 ATTENDEES, Label Summit Latin America in Medellin, Colombia, hosted more people than any Label Summit run anywhere in the world. James Quirk and Danielle Jerschefske report

Label Summit Latin America 2014 showed the growing strength of South America's Andean region as 747 people attended the conference and table-top exhibition held for the first time in Medellin, Colombia.

Previously alternating between Mexico and Brazil, the event's move to Colombia was vindicated by a turn-out higher than in any Label Summit run by the Labelexpo Global Series anywhere in the world.

The Summit drew an impressive geographical spread of visitors, with attendees coming from across the Andean region - Colombia, Peru, Ecuador, Venezuela and Bolivia - as well as Mexico, Brazil, Argentina, Chile, Uruguay, Paraguay, Guatemala, Costa Rica and Panama. The Caribbean islands of Barbados and Trinidad & Tobago were also represented.

Indeed, the heavy weighting of visitors from Latin America's smaller markets, at earlier stages of development than the likes of Mexico, Brazil, Argentina and Chile, was not merely a coincidence of geography. As evidenced by the packed conference room at the end of the second day, here was an audience as attentive and thirsty for knowledge as any hosted by a Label Summit in this region.

And while delegates responded with enthusiasm to the conference program, exhibitors were delighted by their numbers, with the visitor turn-out far higher than reasonably could have been anticipated at a launch event in a local market much smaller than Mexico or Brazil. The exhibition area - which spilled into corridors and even the conference room itself, such was the keenness of industry suppliers to be present - was awash with optimism.

Also of note was the quantity of converters who had only recently entered the self-adhesive label market, most often from a background in sheet-fed offset labels, package printing or wider-format converting. Your correspondents spoke with nearly a dozen such companies, from at least four different countries; further evidence, as previously covered on these pages, of new players entering and finding opportunities in the region's smaller label markets, such as Bolivia and Peru.

DAY ONE

'I know you make the world's best coffee, but I don't think it can explain all the energy surging through this nation right now.' With his opening words, keynote speaker Don Nolan, president of the Materials Group at Avery Dennison, the gold sponsor of the event, astutely noted the mood of optimism within Colombia. The country has seen strong economic development - foreign direct investment rose almost tenfold from 2003-2011, while GDP growth has been dour to six percent for each of the last four years - while in the label sector, Colombia and neighboring Peru have been Latin America's fastest-growing markets in recent years.



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WITH 747 attendees, the Summit in Colombia hosted more people than in anywhere else in the world

"I know you make the world's best coffee, but I don't think it can explain all the energy surging through Colombia right now"

Nolan, who was keen to emphasize Avery Dennison's commitment to the Andean region (see boxout), identified three 'mega-trends' currently affecting the global label industry while neatly explaining how each was being handled in Latin America and where further opportunities for the region's converters lie.

The first, he said, was the unprecedented numbers of people joining the middle-class in developing nations around the world: 'It has been called the biggest growth opportunity in the history of capitalism'. McKinsey, a consultant, estimated that in 2010, two billion new middle-class consumers located across a dozen developing nations spent nearly seven trillion USD. By 2020, it forecasts a further one billion people entering the middle classes, increasing annual spending power to more than 20 trillion USD.

'This trend is driving huge increases in global consumption,' said Nolan, 'and moving the center of gravity for global growth into the developing nations. It is drawing multinationals from around the world to emerging markets, breeding local giants, and raising the competitive stakes for everyone. Last year, global demand for label materials grew by six percent, and 80 percent of that growth came from emerging markets. Yet per capita consumption of label materials in emerging markets is still in single digits – leaving tremendous room for growth.'

The second trend is the 'retail revolution', continued Nolan. 'Technology is shrinking the world and globalizing consumer experience. Global brands and major retailers are creating richer, deeper and more immersive brand stories. They are delivering them across multiple channels: in stores, online, and – increasingly – on mobile devices. It's a revolution with huge implications for our industry: labels and packaging have become a critical part of brand strategy.



SUN Chemical sponsored a networking party at the end of the first day



ARCLAD, the Colombian labelstock manufacturer, was among the exhibitors

EXHIBITORS SEE ANDEAN REGION POTENTIAL

Over 50 industry suppliers exhibited at the Summit, including Arclad, Avery Dennison, EFI, Flint Group, Gallus, HP Indigo, Mark Andy, MPS, Nilpeter, Omet, Prati, RotoMetrics, Sun Chemical, UPM Raflatac and Xeikon. Go to labelsummit.com/colombia for a complete list. Most had strong praise for the event's relocation to Medellin, Colombia.

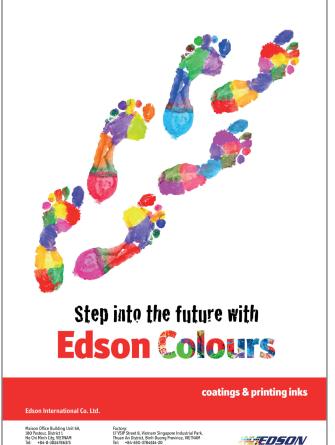
John Vigna of Mark Andy said: 'The first instalment of Label Summit Latin America in Colombia proved that level of interest and growth within the Andean region is definitely something the industry should take seriously. We were extremely delighted and impressed by the converter turnout.'

Jesper Jorgensen of Nilpeter agreed: 'Placing the event at the heart of the Andean region was right on target. This year, surprisingly, many label and packaging printers, all keen to establish new relations, attended for the first time. No doubt, the geographical location played an important part in this.'

Sun Chemical's Alfonso Paredes stated: 'The experience of the first Label Summit in Colombia was a complete success. The printers responded to the conference and the table-top exhibition with high interest and with a lot of questions. The quality of the participants was extremely high and I enjoyed discussing several technical aspects of the label industry in Colombia. For Sun Chemical Corporation and our new Sun Chemical Colombia company, it was a real pleasure to be part of the Label Summit.'

Martin Fraire of Leftech said: 'Our tabletop stand, showing our waterwash flexo plate system, was always busy and many converters did not even know about this cleaner, faster and better technology for processing plates. The printer panel session, where three of the five speakers are actually users of our technology, provided nice support and convinced many people that this is the right way to process plates in a more environmentally friendly way and also much faster than with the solvent-based alternatives. We had so many good responses and projects to do in the short term that we are already short of equipment in Colombia to follow up with all the interested converters."





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"As usual, the specialized networking that happens at a Label Summit is unique"

And we are being asked to play a bigger, more creative role in the development and execution of that strategy.'

The third trend identified by Nolan was sustainability. Though historically of greater importance in the US and Europe compared to Latin America, Nolan said the trend was gathering momentum in the region and cited a number of local brands for whom sustainability has become a central part of their product offering.

Nolan concluded his presentation by outlining some of the growth opportunities in the region. 'Here in Latin America, we see big opportunity in premium wine, spirits and bottled waters,' said Nolan. 'There is surprisingly little penetration by pressuresensitive to date. We need to change that.'

Maria Gruesso, executive president of Colombian association Andigraf, analyzed the country's graphic arts market. She noted that adhesive paper imports had risen by 84 percent from 2011-2012, and a further 35 percent from 2012-2013. The strength of local label converting was further demonstrated by statistics that showed a 44 percent rise in the tonnage of labels being exported from Colombia from January 2013 to February 2014. Ecuador, Venezuela, Panama and Cuba take 58 percent of exported labels.

Gruesso emphasized that Colombia benefits from numerous free trade deals, and as such local converters can look to the US, Canada, Europe and the whole of Latin America as potential markets for exported labels. She highlighted anti-counterfeiting, track-and-trace and augmented reality as particular areas of opportunity within the Colombian label market.

Aldo Gonzalez, CEO of Acrus-CCL, gave delegates the benefits of his extensive experience in mergers and acquisitions. Founder of Chilean wine and spirit label printer Cameo Marinetti, a joint venture with US converting group York Label, Gonzalez has been in charge of steering at least half a dozen M&A processes with international companies, and specializes in these kinds of transitions. Acrus-CCL, based in Santiago, is a joint venture between CCL and a Chilean investment holding company.

Gonzalez detailed the different steps of the buying or selling process and how to correctly value a company. He highlighted the factors that can make or break an acquisition, and emphasized that local knowledge should never be underestimated.

After giving his presentation, Gonzalez reported strong interest in the topic from the audience. 'I was surprised at the immense interest in M&A,' he said. 'More than seven managers and directors asked me for private meetings to cover some topics in more detail. As usual, the specialized networking that happens at a Label Summit is unique.'

Fabian Silva, who now heads national sales for Baumgarten Mexico, created recently following Brazilian converter Baumgarten's acquisition of Etiquetas Rodak, gave a presentation on the parent company's far-reaching and award-winning sustainability program, 'Viva', which is due to be rolled out both in Mexico and at Autopack in Argentina, also recently acquired by Baumgarten.

Technology sessions featured presentations from Martin Fraire of Leftech, the Latin America distributor for Japanese company Toyobo's Cosmolight waterwash flexo plate system, alongside Hernan Saldarriaga, production director at Colombian converter Etipress, a user of the Cosmolight system. Hector Buenavista

AVERY DENNISON 'OPTIMISTIC' About Andean Region

Don Nolan, president of the Materials Group at Avery Dennison, the gold sponsor of the Summit, emphasized during a meeting with L&L the optimism with which the company views the Latin American market as a whole, and the Andean region in particular. He also highlighted that, thanks to recent infrastructure investment in South America, Avery Dennison is able to roll out new products around the world at the same time.

With distribution centers in Lima and Medellin covering the Peruvian and Colombian markets, and manufacturing centers in Brazil and Argentina forming part of the company's global production footprint, the company 'can bring materials and innovations from anywhere', said Nolan. 'Service is the key: thanks to our global infrastructure, innovations can be rolled out globally.'

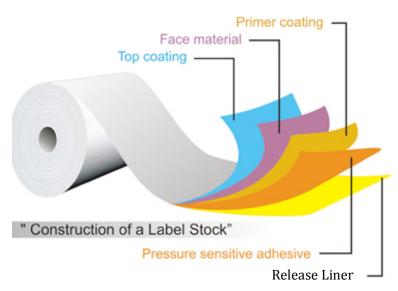
This has become particularly important in Latin America, added Ronaldo Mello, vice president and general manager, Materials Group, South America, because the region's converters 'are quick adopters of new products and often more willing to take risks'. He cited the example of Global MDO, Avery Dennison's prime film range for for semi-conformable containers, which was made available in Latin America at the same time as elsewhere in the world, and which proved particularly popular among the region's converters.

Nolan said that in the last 18 months he had spoken at Labelexpo conferences 'on every continent', with the event in Colombia having 'the most attentive audience'. Colombia and Peru are the two fastestgrowing markets in Latin America for Avery Dennison. 'We feel extremely optimistic about those markets and about the region as a whole; it's a region of opportunity.'

of Daetwyler advised delegates on how to select the right doctor blades to optimize the printing process. Francisco Soto of Rotoflex discussed trends in finishing technology, while John Vigna of



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Mark Andy explained how conventional printing can provide an alternative to digital for short runs.

A digital panel session brought together Alexander Mercon of HP Indigo, Lucas Calvo of Xeikon and Oscar Granados of EFI Jetrion, while a further highlight of day one was a panel discussion between label converters from across the Andean region. Fredy Gallon of Servibarras (Colombia), Jaime Yoshiyama of Kuresa (Peru), Kevin Blanco of Etiflexo (Venezuela), Francisco Arias of Sismode (Ecuador) and Juan Carlos Zamorano of Flexo Print (Bolivia) touched upon a wide range of issues, of which you can read more in the next issue of L&L.

DAY TWO

The conference's second day began with a focus on brand development and product design. Tony Estrada of Constantia Spear looked at pressuresensitive label growth and trends in the beverage industry, noting that while in North America pressure-sensitive labeling takes a 35 percent share of the beer label market, in South and Central America that figure is only two percent. Estrada outlined some of the exciting innovations currently impacting the label industry, such as personalization, augmented reality, thermocratic inks and special-effect varnishes. And he previewed some which are on the horizon: optical effects, printed electronics, labels with embedded NFC capability, and edible inks - about which the food industry is particularly excited.

Powerful Yogurt's Sarah Goldthwait discussed how the brand decided to target the untapped male market with a product redesign geared to appealing to health-conscious men. Forty-seven percent of men in the US do household shopping, yet yoghurt brands have traditionally pitched themselves to the female consumer. Goldthwait took the audience through every step of the rebranding process, and showed how the company was able to successfully open a new market thanks to its new packaging and design.

Hernan Braberman of Tridimage identified six trends in packaging design: 'Wellness design' promotes a feeling of environment and community; 'Bio design' emphasizes the green credentials of a product; 'App design' recognizes that packaging is the window to the brand, and promotes consumer interaction through smart phones; 'Anti digital' describes the trend towards emphasizing a homemade, authentic product; 'Deco design' places an ornamental value on labels and packaging; 'Fun design' uses humor as a tool to sell a product.

Dr Henry Castillo from NeuroMind delved into the application of 'neuromarketing' on the design of labels and packaging. Castillo demonstrated the power of design on consumer decisions, how effective product design can influence perception of quality and



HERNAN Braberman of Tridimage

how neuroscience can be the key to entering the mind of the consumer.

Andreu Gombau of UPM Raflatac focused on trends and innovations in beverage and spirit labeling, outlining the opportunities available to help label converters shift from wet-glue to pressure-sensitive labeling. Uli Jorgens of Karlville talked about mid-web lamination for short-run flexible packaging and pouches. Sun Chemical's Alfonso Paredes gave an overview of brand protection with a comprehensive examination of security inks and coatings and instant verification and authentication technologies using mobile technology.

The conference ended with a series of 10-minute presentations on new technology from various suppliers: Carlos Pescott of GEW, John Thome of BST Pro Mark, Guillermo Gonzalez of Klockner Pentaplast, Carlos Clement of Gerlab Chemical Services, Nick Vindel of JM Heaford and Luca Tubbini of X-Rite all took part.

Label Summit Latin America returns to Mexico in 2015, being held on April 21-22 at the World Trade Center in Mexico City.



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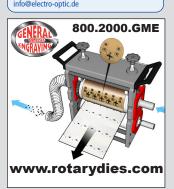


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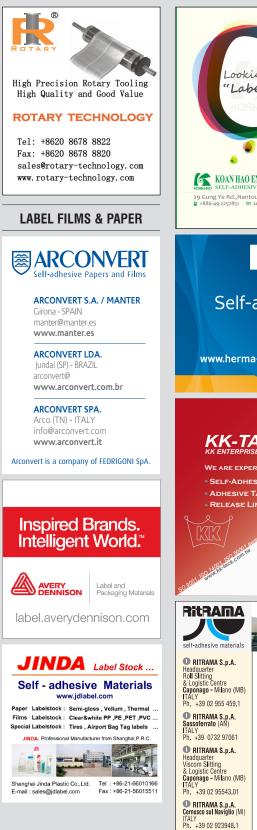


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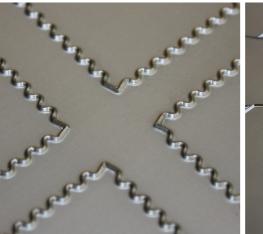


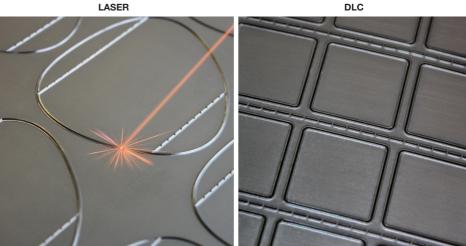


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Hardness of cutting edges: 65-68 HRC. Finishing options are NTP and DLC.

NTP

Standard or laser-hardened flexible die with a very hard coating, ideal for the abrasive thermal (thermal transfer) papers and cardboard. A thick layer of NTP enables extremely high running performances with outstanding wear properties.

Hardness of cutting edges: 60-63 HRC. Friction coefficient: 0,3-0,4.

DLC

Standard or laser-hardened flexible die with a very hard and non-stick coating DLC, ideal for the separation of inks and adhesives, combined with a very long life. Micro-hardness of cutting edges: 1500-2500HV. Friction coefficient: 0,02-0,10.

MAGNETIC CYLINDER



SHEETER CYLINDER

GEAR

