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VOLUME 36 | ISSUE # 6 | DEC 2014 – JAN 2015 LABELSANDLABELING.COM

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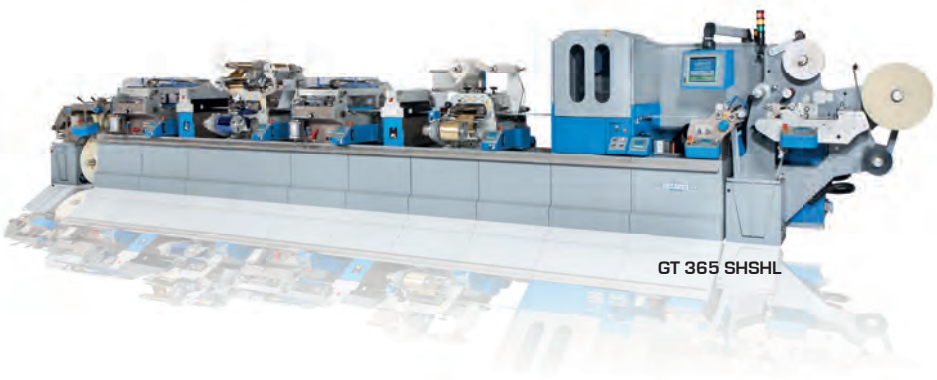

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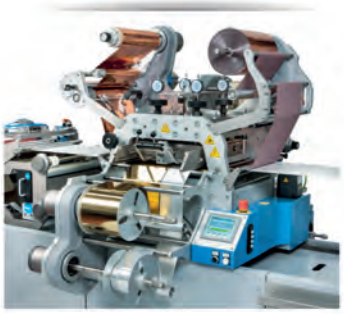

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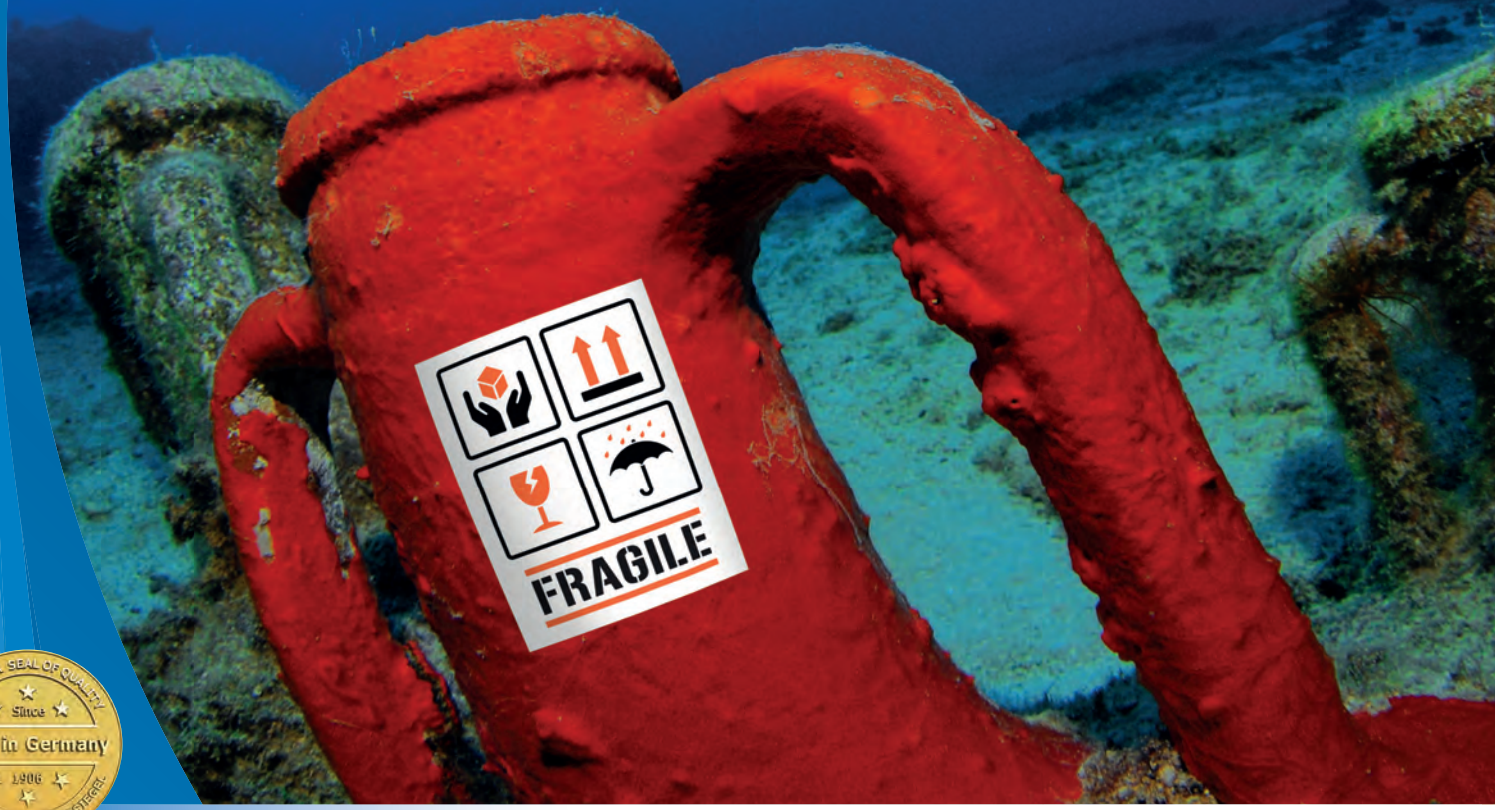

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L&L – *Meet the team*

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Group Managing Editor

Writing about the labels and package print industries for 25 years and based in London

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Director of Strategic Development

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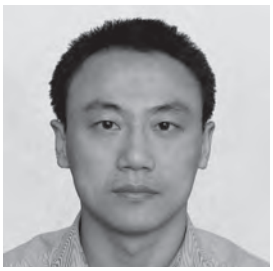

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E: *subs@labelsandlabeling.com*
ISSN: 1478-7520

Printed by

Bishops Printers, Portsmouth, United Kingdom

US mailing

Labels & Labeling (USPS No: 002-914) is published bi-monthly by Tarsus Exhibitions and Publishing Ltd and distributed in the US by SPP, 95 Aberdeen Road, Emigsville PA 17318. Periodicals postage paid at Emigsville, PA.
Postmaster: Send address changes to Labels & Labeling, 3175 N. Patrick Blvd. Suite 180, Brookfield, WI 53045

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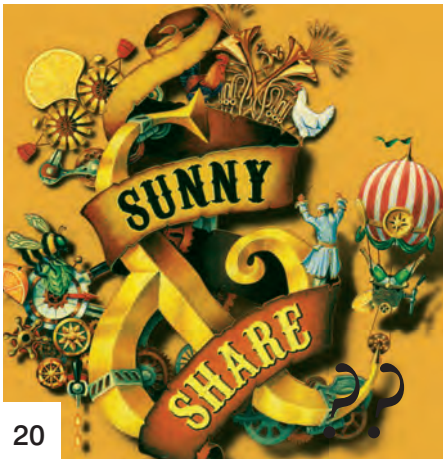

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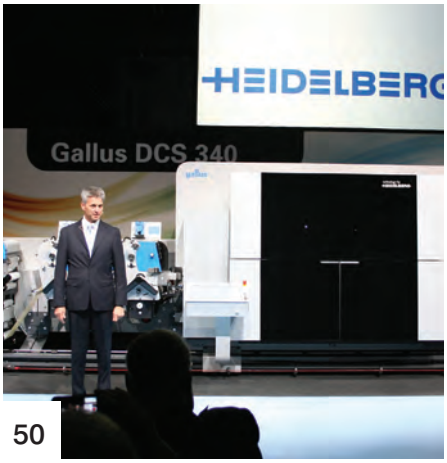

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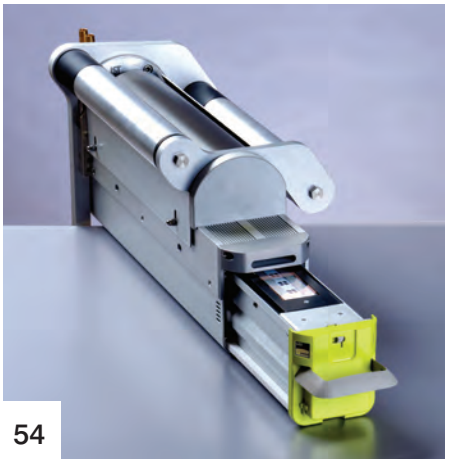
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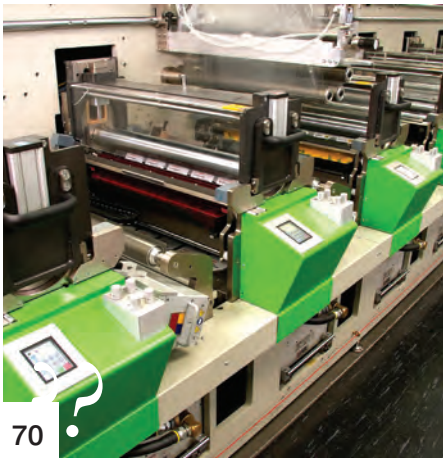

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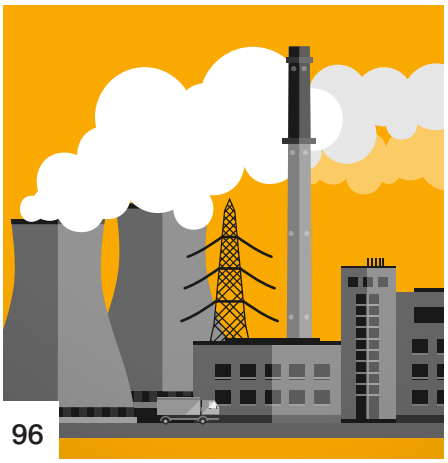

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Technology

People

Online Contents
labels&labeling.com

The Labels & Labeling website provides daily news updates for the industry, opinion pieces from its global editorial team, videos showcasing new technologies, and white papers addressing trends and hot topics.

Current top headlines (news)
Heidelberg to attend Gulf Print & Pack and Landa makes appointments to drive press commercialization

Packaging in flight (opinion)
David Pittman looks at the sorts of labels and packaging you might encounter when traveling

PS market trends (video)
Ritrama discusses trends in the pressure-sensitive label market

2015 trends forecast (white paper)
Research by Landor outlines what best brands of the future will look like

Ten years ago (L&L issue 6, 2004)

P.43 **Tarsus held a European Label Summit in Prague** as eight former members of the Warsaw Pact joined the EU. 'Although the EU's population increased by 17 percent, its GDP grew by only six percent, giving some indication of the economic gulf between the former Eastern bloc states and Western Europe,' says the article. That difference in economic development has since driven high label growth rates throughout Central and Eastern Europe.

P.14 **At Labelexpo Americas** AVT introduced the first closed loop verification system between PDF file, press camera and rewinder. The company's WorkFlow Link allowed the rewinder to automatically move the next defective label to the splice table following an offline 'roll report'. The pioneering beta tester was York Label. At the show, AVT's system was installed on a PCMC Evolution press

P.56 **With Servo drives appearing on new narrow web presses shown at Labelexpo** – the Comco ProGlide and Gallus EM410 among others – L&L was keen to dispel some 'marketing myths' which surrounded servos. 'Just as drives which operate via a main shaft, the potential disadvantages include angular deviations, backlash, wear, the need for regular servicing and high noise levels.'

P.74 **A major effort was under way to turn round Denmark-based die manufacturer Gerhardt after years of turmoil.** L&L interviewed managing director Klaus Damberg after three tough years changing the company culture and sorting out its deep financial problems. Damberg had stemmed the losses and was in the middle of a 14m GBP global reinvestment program.

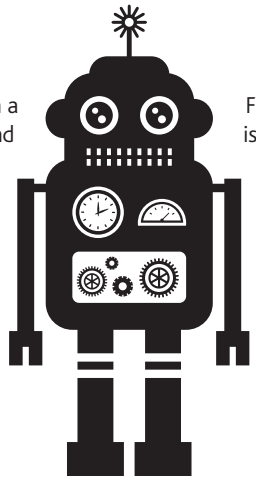
Reader poll

Question: How far are you looking to automate your processes?

Labels and Labeling regulary polls its online readers regarding key trends and topics affecting the label and package printing market

42%
Semi-automate, with a mix of technology and skilled personnel

38%
Fully, web-to-print is the future of my label business



13%
Only slightly, people are the bedrock of my operations

7%
Not at all

To be part of the debate visit our current online poll at: www.labelsandlabeling.com

A new look L&L

Editor's note

Welcome to the new look Labels & Labeling. We are responding to a number of changes in the industry in the six years since the last redesign of the magazine. First, we have seen a growing interest in a diversification into flexible packaging and digital carton converting. For that reason we have merged the content of our Pack Print World magazine into Labels & Labeling. The regular dedicated PPW online newsletter will continue.

The second big change we have seen is breaking news stories moving online. We will now concentrate more in the printed edition on news analysis – so for breaking news be sure to regularly log onto www.labelsandlabeling.com and subscribe to our fortnightly e-mail newsletter, Label News, for the industry's most comprehensive news service and accompanying twitter feed.

We want to bring the people who are building the industry more into our pages, with regular in-depth Q&A sessions on key industry figures, and hearing the voices of the young managers who represent the industry's future.

At the same time we will be featuring more input from our global editorial team, with editors positioned in North America, Europe, Latin America, India, China and Australasia.

Andy Thomas
Group Managing Editor

Drum & Chemical Label Printing Made Easy

EDGE 850

Digital Label Printer

News

Consolidation continues

There were a number of important acquisitions this month

CCL gains on-line capability

CCL Industries acquired Druckerei Nilles and its related subsidiaries, including an operation that allows customers in Europe servicing multiple end-use markets to purchase custom designed labels online using proprietary e-commerce software, more than 500 domain names and digital printing capabilities.

Druckerei Nilles is a private company located in the heart of the German wine producing region on the River Mosel Its 2014 sales are estimated to be approximately 15.7 million USD with an adjusted EBITDA of 2.7 million USD.

CCL Industries president and chief executive officer Geoffrey T. Martin said the company's proprietary e-commerce platform complements the WePrint initiative recently launched by Avery in the US through www.avery.com.

'This new service gives consumers and small businesses options to either print labels and cards from our cloud-based online design tool using preformatted Avery products on their own desk top printers, or to have them professionally produced and shipped directly from Avery,' Martin said.

'Nilles offers a similar online service to higher volume customers with more complex label requirements on a roll, in special sizes and materials.'

The e-commerce initiative will continue to be headed by James Nilles and become a new business unit of Avery Europe led by vice-president and managing director Mark Cooper.

RotoMetrics changes hands

Sentinel Capital Partners, a private equity firm, acquired RotoMetrics from fellow investment company Morgenthaler Private Equity.

Sentinel Capital Partners has broad experience investing in specialty industrial businesses, and targets targets lower middle market private equity investments in eight industry sectors – aerospace/defense, business services, consumer, distribution, food/restaurants, franchising, healthcare and industrials.

For the most up-to-date label industry news, see www.labelsandlabeling.com

Globalization

Russia operation opened

Rotatek

Rotatek established a new office in Moscow to provide a full sales and service capability to the Russian and CIS markets.

Rotatek Russia's area manager, Marin Orriols, has more than 20 years' experience in the packaging industry covering these markets. His main responsibility will be to implement Rotatek's new product and service strategy into these markets, as well as providing technical and marketing support.

Rotatek Russia will work closely with experienced Russian engineering company Apostrof on product promotion and after sales services. Founded in 1993, Apostrof is a strong player in the Russian printing industry, with a team of 15 employees, main office in Moscow.

Trade visit finds new business

MPS

MPS agreed four deals for flexo presses in Asia after partaking in a trade mission to Japan and South Korea alongside the Dutch Royal House and Dutch Minister of Economic Affairs.

In Japan orders were confirmed by Toray Industries and T&K Toka for one flexo press each, with a further two to be installed in South Korea.

T&K Toka is the agent of MPS in Japan. It will install a flexo press in the demonstration center of its factory in Saitama Prefecture.

Increasing capacity

Investments in film

Avery Dennison

Avery Dennison significantly increased the capacity of its European film operations with a seven million EUR (8.7 million USD) investment in a tandem silicone/adhesive laminating line, and a new slitting and shipping hall at its Gotha plant in Germany.

The plant extension adds one third to the existing 9,000 sq m of operations space and increases top coating capacity by 50 million sq m. The reorganized production operation has allowed Avery Dennison to optimize its wider European film coating operations, resulting in a significant increase of overall capacity. At the same time, the tandem coater offers increased production flexibility.

The new slitting and distribution hall is separated from the coaters by a newly built wall and positive pressure doors, creating a dust-free coating area. The factory extension has allowed the in-sourcing of warehousing, which will greatly increase the plant's overall efficiency and speed of response.

The plant extension was opened by Angelo Depietri, vice-president/general manager of Avery Dennison's Materials Group Europe, along with representatives from the Gotha municipality; Avery Dennison was the first major manufacturer to build a plant in the region back in 1997.

Paper capacity increased

B&B

Another capacity increase came from Brigl & Bergmeister, which invested in a new Voith film press at its Niklasdorf mill that will contribute to a 5,000 ton capacity increase and higher energy efficiency.

In memorium

The labels industry lost two longstanding members.

Gerhard Metz *(left top)*, founder of the IST Metz group, died in Waren an der Müritz following a short illness. Metz had an extraordinary personal story. Born in Mecklenburg-Vorpommern, Metz initially completed an apprenticeship as a fitter and was one of the first engineers in the German Democratic Republic to work on jet engines for planes.

When the German Democratic Republic scrapped its own aeroplane construction program in early 1961, a move to the west followed for Gerhard Metz and his wife.

It was here that Metz developed the first systems for drying surface coatings using ultraviolet light. These systems were so successful that an independent company was founded with STG, initially under the management of Hildebrand and its partner Werner & Pfleiderer. Gerhard Metz took over completely when Hildebrand went into liquidation in 1982.

Robert (Bob) J. Biava *(left bottom)*, the former owner of Driscoll Label in Fairfield, New Jersey, passed away in November at the age 72. He was the husband of Patricia Biava.

Bob was a graduate of Pennsylvania Military College and a veteran of the US Army. In 1985 he and his wife bought Driscoll Label from Elwood Driscoll. The acquisition included a separate business, Custom Cut Label Stock, a supplier of small quantity, first quality print materials.

In the 1990s Driscoll Label's business shifted from supplying small retail businesses to servicing the needs of larger and more distant companies. The company evolved from a three-color Mark Andy press to larger machines from Roto Press, eventually to a 10-color press.

In 2005 they sold the businesses and retired.

A long-time TLMI member, Bob Biava was also one of the founders, in the mid-1990s, of NELMA, the North East Label Manufacturers Association.

Future of the industry

Converters must embrace Big Data era

In a key Labelexpo South China conference session, Yajuan Liu, inkjet sales director at Beijing Founder Electronics, advised label converters to tap into the new opportunities presented by an era of internet retailing and Big Data.

The signs of change are everywhere in China, said Liu, impacting brick and mortar retail stores, traditional hardware companies like Kodak, changing banking models and the way mobile phone companies derive their revenue.

In the recent record November sales in China, 42 percent of purchases were made from mobile phones – a further record.

'Printers must not panic – they need to take the initiative,' said Liu. 'You have to think from the e-commerce perspective. We should welcome the internet economy not as an enemy but as a friend.'

Label and packaging market looks forward to 2015

Names from across the label and package printing supply chain predict big thins in 2015, including a higher level of investment, more automation, increased individualization and personalization of printed products and the folding carton market opening up to digital printing. Those to have made predictions include Nilpeter, Gallus, FFEI, Landa Digital Printing, Channeled Resources.

Read the full article at http://tinyurl.com/l73hwyl.

Industry milestones

Celebrating its roots

KBA

2014 marked 200 years since a steam-powered double-cylinder printing press from Friedrich Koenig and Andreas Bauer was used for the first time to print The Times in London.

Nearly three years later, on August 9, 1817, Koenig and Bauer founded the world's first printing press factory, near Würzburg. Today KBA's main production facility can be found nearby.

KBA said the double-cylinder press for The Times in 1814 was an important landmark in the 500-year-plus history of printing, as its hourly output of 1,100 printed sheets compared to 240 by Gutenberg's hand press increased productivity by almost five times.

Major solar project in China

APP

Asia Pulp & Paper (APP) has completed the installation of a major solar panel array at the Gold HongYe mill in Suzou, China, creating one of the world's largest rooftop solar installations. The installation consists of 10,000 individual panels, covering approximately 300,000 sq m or the equivalent of 42 football pitches, installed across the 12 production buildings, warehouses and administrative buildings of the mill.

It is anticipated that the solar project will produce approximately 20 million KWh of energy– enough to power 6,000 homes in the local area.

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New Products

01

02

03

⓫ Heidelberg
Gallus DCS 340
Heidelberg has launched a new digital press platform based on Fujifilm's inkjet technology and developed in collaboration with Gallus. The digital in-line system has been designed for the self-adhesive label market and features a native print resolution of 1,200dpi and production speeds of 50m/min. Badged as the Gallus DCS 340, the system has been jointly developed by Heidelberg and Gallus with Heidelberg to manufacture the inkjet unit at its Wiesloch-Walldorf site, while the flexo and converting units will be produced at the Gallus plant in St Gallen, Switzerland. Heidelberg's Prinect digital front end is used to automate the pre-press workflow and ensure efficient preparation of data, complete with comprehensive color management. *For full story see p.42.*

⓬ UPM Raflatac
RafStatic
UPM Raflatac has introduced RafStatic, a new non-adhesive product for static-cling labeling in Europe. RafStatic PVC Clear 140 enables re-positionable, reusable and residue-free labeling in promotional and retail applications like point-of-sales signage, promotion labels, window stickers and seasonal graphics.

⓭ Mirri
MirriEco Ag
Mirri has developed and launched MirriEco Ag, a fully recyclable metallized board product intended to meet the requirements of retailers and brands looking to limit their environmental impact by using materials that are eco-friendly. Mirri said that as a result of this demand, print buyers are looking for environmental alternatives to oil-based products. MirriEco Ag is a direct metallized high-quality board that is recyclable and repulpable (PTS –method RH 21/97). It is a mono product that can be placed in recycling waste, with the metallic layer dispersed during the de-inking process.

ABOVE
1. Heidelberg, Gallus DCS 340.
2. UPM Raflatac, RafStatic
3. Mirri, MirriEco AG

04

ABOVE

4. Sick (UK), W2S

5. Atlantic Zeiser, Digiline Booklet.

04 Sick (UK)

W2S

Sick (UK) has introduced the W2S family of sub-miniature photoelectric positioning sensors to its portfolio, which are designed for use with difficult packaging materials, even matte black. The four models in the Sick W2S range are contained in a rugged IP67-rated housing that measures only 7.7 x 21.8 x 13.5mm. Sick said the slim housing allows convenient mounting within tight spaces demanded by compact machinery. The double-sealed 45-degree offset cable entry minimizes environmental ingress and reduces accidental damage during operation.

Press control and quality assurance system

AVT

Advanced Vision Technology (AVT) has introduced a press control and quality assurance system for the new Heidelberg digital inkjet press, which has been designed to efficiently support printing process automation and calibration 'in full synergy with the press controller'. Features of the AVT system include continuous quality monitoring to maintain digital printing quality, real-time feedbacks and ongoing detection of missing, deviating or weak printing nozzles. It can be expanded to include further features, such as color control, verification of geometric parameters like color to color registration, image placement and an advanced reporting system.

Hard chrome plating dies

Diehard Dies

Diehard Dies, the only Indian rotary die manufacturer for the flexo industry, launched hard chrome plating dies at Labelexpo India 2014. These flexible dies are provided with chrome plating for longer runs and laser hardened for very long runs. Cutting, creasing, perforating and embossing can be done in-line using these dies. Both kiss cut and cut through can be done for labels.

Energy labeling products

UPM Raflatac

UPM Raflatac has developed a series of removable label materials to meet the requirements of EU Energy Labelling Directive 2010/30/EU, which requires the efficiency of products which have a significant impact on energy consumption to be clearly labeled to guide decisions by purchasers. UPM Raflatac's energy labeling products offer filmic, coated paper and digital label faces with a choice of removable

and ultra-removable adhesives selected for different types of surfaces and levels of smoothness or texture. Once the label is removed, sensitive surfaces remain free from adhesive residue.

⓯ Digiline Booklet

Atlantic Zeiser

Atlantic Zeiser has formally introduced Digiline Booklet, an integrated system for audit-proof coding of booklet labels up to 4mm thick using an audit-proof process verified by an inspection camera. Digiline Booklet is dedicated for coding labels that are to be used in clinical drug trials where regulations and safety requirements are increasing the volume of information content in, and hence the thickness of, booklet labels.

KM Packaging Services

KPeel 3G

KM Packaging Services has introduced KPeel 3G, a heatsealable polyester film which peels cleanly from trays in ambient or chilled conditions. Available in 21-, 25- and 40-micron thickness, KPeel 3G is suitable for printing using the flexo and gravure processes. Additional features include macro hole and laser perforation. It is suitable for microwave and conventional oven cooking, and chillable. KPeel 3G also facilitates an excellent hot peel, making it ideal for use on products such as ready meals, soft fruit and salad bowls.

ColorProof 5.6

GMG

MG has launched GMG ColorProof 5.6, configured for accurate proofing of optically brightened media. Until recently, GMG said, measuring devices and the light in viewing booths had not been subject to any standards regarding how they measured or illuminated print media that contains optical brightening agents to increase 'whiteness'. With recent revisions of those ISO norms and anticipated update to ISO 12647-2:2013, several changes have been made to address the color matching problems caused by OBA enhanced media. GMG ColorProof 5.6 provides new proof standards, full support of the new M0/M1/M2 measuring conditions, and the new enhanced proof paper 'GMG ProofPaper semimatte 250 OBA' to achieve highest quality and a good proof-to-print match.

06

06 Herma
62K

Herma has added 62K, an adhesive suitable for deep-freeze environments and that is approved for use with a range of products, including fatty foods. Herma said reliable labeling of deep-frozen products has previously presented a 'considerable challenge', especially in the case of fatty foods such as meat, fish or dairy ice-cream. Further, some deep-freeze adhesives are not approved at all for use with these products. Although some such adhesives can be used up to a certain fat content, problems can arise with moist and icy surfaces, and when produced to labels. At deep-freeze temperatures, Herma said 62K offers tack and final adhesion attributes that were previously available only with hot-melt adhesives. This is true even when used in conjunction with challenging surfaces that are popular in the food industry, such as PE and PP films, and curved surfaces. Such properties originate from an entirely new polymer developed by Herma in its own laboratory.

ABOVE

06. Herma's 62k adhesive is suitable for deep freeze environments

OPPOSITE

07. LX900 color label printer, environments

UPM Raflatac
Removable labels

UPM Raflatac has developed a series of removable label materials to meet the requirements of EU Energy Labelling Directive 2010/30/EU, which requires the efficiency of products which have a significant impact on energy consumption to be clearly labeled to guide decisions by purchasers.

White goods like refrigerators, washing machines and dryers, as well as TVs, window glazing and air-conditioning units have been included in the scope of the Energy Labelling Directive for some time. More product groups are gradually being included, with vacuum cleaners among the most recent products to require energy labels. UPM Raflatac new series of removable label materials have been designed to suit the directive, and to meet brand owner requirements for full functionality, end-user convenience and visually high quality. They also fulfill brand owners' increasingly rigorous demands for environmentally sound labeling alternatives, UPM Raflatac said.

Kama
FlexFold 52

German folding carton finishing equipment manufacture Kama has introduced its FlexFold 52 folder gluer, which has been designed with automatic set-up for fast changeovers from one job to the next, making it perfect for production of short runs of folding cartons. This utilizes a patented system,

APA (automated plough length adjustment), which makes it possible to adjust the folding belts automatically in both transverse and longitudinal directions.

Primera Technology

Cost-per-label calculator

Primera Technology has launched a new cost-per-label calculator for its LX900 color label printer, which has been designed to report the real-world cost per label that customers will actually experience when using the printer. Cost-per-label was previously quoted using Primera Technology's best print quality mode. However, a recent study of Primera Technology's installed base of printers showed that few customers ever use this print mode. Instead, they most commonly use the default print quality mode, better, which delivers an optimal balance between speed, print quality and cost. In addition, the previous calculator used manufacturer's suggested retail price (MSRP) pricing for the ink cartridges. Now, an average street price of the ink cartridges is used to calculate cost per label. Primera Technology said this more accurately reflects the actual cost that a customer will pay for the ink when printing their labels.

Rollem International

Delta

Rollem International has introduced the Delta series of rotary sheet-fed flexo-magnetic die cutters, intended to die cut, kiss cut and score a wide range of products including labels, boxes, decals, stickers, card products, presentation folders, door hangers and shaped direct mailers. Delta units are heavy-duty production level machines capable of finishing 50 sheets or thousands of sheets, and offers quick job changeovers, ease of operation and versatility, so making it suited for finishing shorter run personalized products. Delta series machines can operate at speeds up to 4,500sph on substrates as thick as .022 cartonboard.

Highcon

Euclid II

Highcon has launched the next generation of its Euclid cutting and creasing system, including an integrated digital stripping unit and other new features. Euclid II will be available at a range of price points and in different configurations as defined by the customer. This is intended to provide a tailored system for digitally finishing a range of printed products, while also reducing the level of capital expenditure required to implement the technology. A top-of-the-line Euclid II+ will include all of the new features. New features of the Euclid II include a new substrate handling system, which can handle a wide range of substrates such as paper, folding carton, labels and microflute.

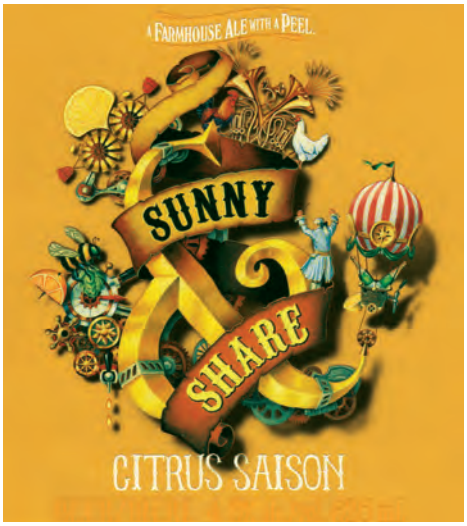
Packaging Life

01

02

03

04



05

06

01 Hammer Packaging Corp
Right Guard Xtreme Fresh
Winner of TLMI Awards category Flexography – Line &Screen/Tone – Prime

02 Garbini Garbino
Syracuse Label & Surround Printing
Winner TLMI Tags-Merchandising category

03 Girl & Dragon, 2013 Malbec Argentina
Collotype Labels USA Inc
Winner TLMI Wine & Spirits, Flexographic/Letterpress, Line & Screen/Tone – Prime category.

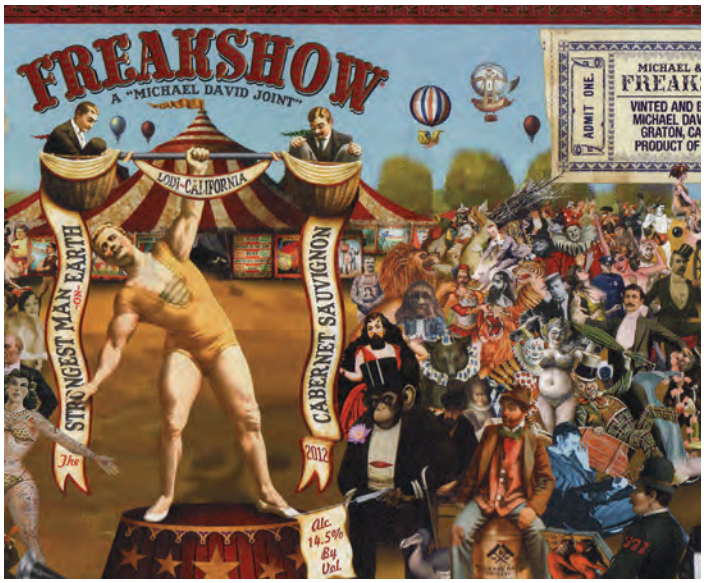
04 Leather & Lace Bronzer
McDowell Label & Screen Printing
Winner TLMI Roll-to-Roll Multi-process – Line & Screen/ Tone – Prime category

05 Sunny & Share Citrus Saison
ASL Print FX
Winner TLMI Roll-to-Roll Multi-Process- Color Process – Prime category

06 Nuit de la Saint-Jean
ASL Print FX
Winner TLMI Wine & Spirits-Flexography/Letterpress – Line/ Prime category

07 Goliad Brewing Company Redfish IPA
TVC Label, winner TLMI
Flexography- Color Process – Prime category

07



08

09

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11

08 Freakshow 2012 Cabernet Sauvignon
Collotype Labels Digital Department
Winner TLMI Wine & Spirits-Digital Printing – Color Process Prime category

09 Luna Nuda, Italia Prosecco
Collotype Labels USA,
Winner TLMI Wine & Spirits-Offset – Line & Screen/Tone – Prime category

10 Sierra Nevada Pale Ale,
Digital Label Solutions,
Winner TLMI Digital Printing – Color Process Prime category

11 Pacific Rim Mystic Blend, 2013 Riesling,
Collotype Labels USA,
Winner TLMI Wine & Spirits – Offset – Color Process – Prime category

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Installations


01


02


03


04

01 Durst Tau LFS 330
TLF Graphics
USA
Rochester-based TLF Graphics has invested in a Durst Tau LFS 330 UV inkjet digital label press, the first in North America. An established upstate New York firm that specializes in industrial labels, product decoration and retail signage, TLF Graphics' new Tau LFS 330 is its first piece of Durst equipment and the first LFS 330 end-to-end system in North America. Durst's inkjet system for digital labels and specialty packaging employs in-line Spartanics laser finishing systems.

02 HP Indigo WS6800
Baker Self Adhesive Labels
UK
Baker Self Adhesive Labels has installed an HP Indigo WS6800, a UK first and its fifth model from the digital press manufacturer in the last decade. The new WS6800 boasts additional features that will reduce many of the non-productive tasks, including on-press color profiling and color matching for reprints, and Automatic Alert Agent, which spots any errors in the print and can be set to warn the operator or stop the press. Baker Self Adhesive Labels' investment in the WS6800 also includes upgrading its existing WS6600.

03 Edale FL-1
Mai
Argentina
Argentinean-based tea packaging specialist Mai, which has a department that prints tea bag tags, labels and envelopes, has placed an order for its fifth Edale FL-1 press since 2011 The presses which stand at a compact 2.5 sqm, are all of the same specification – four colors with water-based drying, and a unique 1.2m freestanding unwind unit.

04 Lemorau ICR3
Etiart
Spain
Lemorau has installed an ICR3 inspection machine at Spanish printer Etiart, a self-adhesive label specialist based in Valencia. The 350mm-wide ICR3 installed at Etiart features a Nyquist print inspection system, servo-drive technology, dual rewinding, air trim removal, web guiding and can operate at a maximum speed of 200m/min.

SurePress L-4033AW
J P Printers
India
J P Printers of Mumbai, India has purchased an Epson SurePress L-4033AW, which it will to print short-run labels and create mark-ups in the cosmetic and specialty food segments. The sale was handled by Arrow Digital, the distributor of Epson Surepress products in India.

Focus Proflex 250
The Label Company
UK
Cheshire, UK-based trade label printer The Label Company has installed a new 6-color Proflex 250 press from Focus Label Machinery. The Proflex 250 is a 10in wide modular, in-line press, equipped with turn bar, laminating, die station, sheeting station, slitting and rewinding. In addition to the UV drying system, the press is equipped with standard dryers, which combine infrared lamps with forced cold air, allowing faster drying speeds without heat build-up. The removable print cassettes can be interchanged, or removed from the press in a few seconds, allowing very fast job changes and clean ups.

Installations


05


06


07

08

05 Nuova Gidue REVO M5 Excellence

Digital Labels
Jordan
Digital Labels has invested in the REVO Digital Flexo project by purchasing a Nuova Gidue REVO M5 Excellence machine. The press purchased by Digital Labels is a Nuova Gidue M5 Excellence combined with the REVO method. REVO Digital Flexo is a project involving eight companies from across the flexo industry promoting a new manufacturing method to 'digitize' the flexographic process, so making it consistent and cost-effective. This includes AVT, DuPont, , Esko, Nuova Gidue, UPM Raflatac, Flint Group and Adare Group. The project utilizes new software, hardware, UV flexo inks, digital plates, new generation anilox rollers, standardized substrates and digital automation on-press exclusively provided by the project's supplier members.

Nuova Gidue M5 UV flexo press

FTK Ambalaj
Turkey
Turkish converter FTK Ambalaj has purchased a Nuova Gidue M5 UV flexo press, its second such machine from the Italian manufacturer. The new Nova Gidue M5 UV flexo press is a 10-color, 430mm-wide machine that will be installed in its plant in Istanbul by the end of the year. It invested in its first Nuova Gidue M5 UV flexo press in 2012, which is a 370mm-wide model with eight printing stations.

06 Kodak Flexcel Direct

Nägele Digital Repro
Germany
Nägele Digital Repro has extended its portfolio to include direct engraving after investing in a Kodak Flexcel Direct system. Kodak said that to meet the current and future requirements of its brand manufacturer and packaging producer customers, Nägele Digital Repro has extended its production capabilities with a Kodak Flexcel Direct system for the direct engraving of elastomer flexographic plates and sleeves. Nägele Digital Repro already operates a number of Kodak systems, such as a Flexcel NX, with Kodak Flexcel NX Plates.

07 MPS EF

Stampiton Labels
UK
Stampiton Labels, located in the heart of the Peak District, has purchased an 8-color MPS EF flexo press with a web width of 520mm to increase production capacity in its core business area of milk labels. Stampiton Labels operates 16 presses and utilizes flexo, UV letterpress and offset litho print processes and its labels are printed on a wide range of materials, with the new press required to hold register and die-cut at very high print speeds on a wide range of substrates.

Starfoil CF110

Drukkerij Hensen
The Netherlands
Dutch printer Drukkerij Hensen has installed the first CF110 cold foil and cast and cure system Starfoil Technology. Starfoil said the CF110 has been designed as a simple-to-handle, compact system for gloss offset foil transfer, and to satisfy the needs of users on a tighter budget.

08 Full HD Flexo

Shilp Gravures
India
Ahmedabad-based Shilp Gravures has installed Esko's Full HD Flexo system, a combination of in-line UV2 technology on its CDI 4260 digital flexo imager and special screening, to match the quality of flexo to gravure. Shilp Gravures is acknowledged as a leading Indian gravure cylinder trade house.

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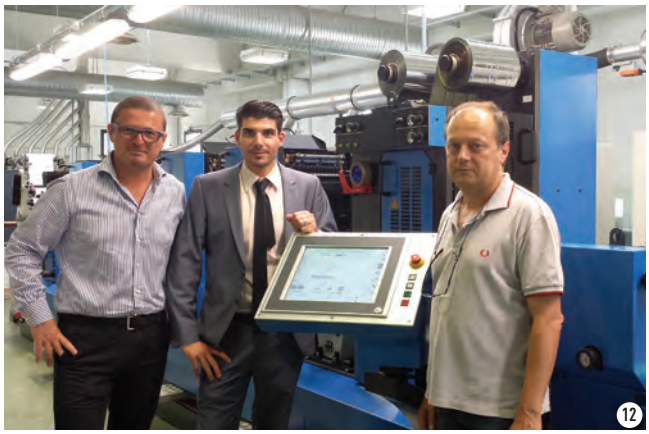
09 Heidelberg Speedmaster XL 106
DWS Printing Associates
USA
DWS Printing Associates of Deer Park, New York, has installed one of the first custom-configured, Peak Performance class Heidelberg Speedmaster XL 106 presses in the US, and reported a host of benefits since it was commissioned last year. DWS Printing Associates opted for a configuration designed to advance its continuous improvement initiatives, and is the first Heidelberg Speedmaster XL 106 in the US with a combination of CutStar in-line sheeter, hybrid UV technology, and both Prinect Inpress Control and Prinect Axis Control color measurement and control systems. Heidelberg said that because DWS Printing Associates frequently works with BOPP films and light metallized papers, it needed a press that could handle these difficult substrates without tripping, with the CutStar roll sheeter making a huge contribution to printing successfully on these types of substrates. Further, the dual color management systems are suited to the range and types of substrates DWS Printing Associates uses to produce a wide variety of cut-and-stack, pressure-sensitive and in-mold labels for the beverage, food and household markets.

10 Eagle Systems Eco-Eagle
Packaging Graphics
USA
Packaging Graphics has installed an Eco-Eagle cold foil system from Eagle Systems to increase its cold foil efficiencies and effectiveness. The Eco-Eagle cold foil system is a value-added finishing technique for cold foil applications. The add-on system can retrofit to new or existing 28-80in sheet-fed offset presses from most major press manufacturers. It offers users the flexibility to apply a single 40in width of foil or multiple widths of foil, in any combination, as narrow as two inches. This ability reduces foil cost and consumption. In addition, the cold foil system operates on about the same amount of electricity as a 1,500-watt hair dryer, reducing energy demands in production environments. This year, Eagle Systems has added the ability to use a 16,000k foil roll which allows for less change over during a job run.

⓫



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VCM-L Lab/Pilot Coating machines

Multiple companies
Worldwide

RK PrintCoat Instruments has commissioned and installed VCM-L Lab/Pilot Coating machines at Avery Dennison, HB Fuller, Toppan and Brady Corporation. The VCM-L Lab/Pilot Coater is designed to fit seamlessly with process and production workflows and employs advanced servo drives, a redesigned and super-efficient oven and extraction system.

⓫ HP Indigo 20000

Target Labels & Packaging
USA

Salt Lake City-based Target Labels and Packaging, a fully integrated label and flexible packaging converter, is expanding its digital printing offering with an HP Indigo 20000 digital press. Target Labels and Packaging is an existing HP Indigo digital press user, having installed its first in 2007. It also uses flexo in its production. With the new 30in-wide format HP Indigo 20000, Target Labels & Packaging will be able to produce pressure-sensitive labels, shrink sleeves and the vast majority of flexible packaging applications, including those not previously addressable with digital printing technology because of size limitations. The HP Indigo 20000 will also work seamlessly with Target Labels and Packaging's existing 60in laminator and converting equipment. Target Labels and Packaging said the press will help the company deliver faster turnaround times, versioning with variable data and cost-effective short runs for seasonal labels and packaging.

⓬ Gallus TCS250

Mandruzzato
Italy

A new Gallus TCS 250 has been installed by Tipografia Mandruzzato in Vò in the Italian province of Padua, primarily for wine label production. This is the second press of its type for Tipografia Mandruzzato and its partners Claudio Mandruzzato and Adriano, Luca and Marco Galante. The company, which was founded in 1983 and has a workforce of 15, services customers from the local region.

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Environmental News

APR issues Final Report on sleeve labels

NGO issues guidelines to minimize impact of shrink sleeves

The Association of Postconsumer Plastic Recyclers, a trade organization representing the plastics recycling industry in North America, has released the Final Report of the Sleeve Label Working Group detailing recommendations the packaging industry can use to mitigate the impact of sleeve labels on the recycling of PET bottles.

Formed in June of 2013, the APR working group represented all segments of the recycling industry and label supply chain, including PET reclaimers, brand owners, material suppliers, equipment vendors and testing labs. Their primary focus was the ever growing technical issues associated with recycling containers with full wrap shrink sleeve labels. John Standish, technical director of APR, said: 'Recyclers were seeing more and more containers with full wrap shrink sleeve labels contaminating their material. We formed a group to clearly identify steps that would allow brand owners to take advantage of these labels without creating a negative impact on the quality of the rPET stream.'

Byron Geiger, president of Custom Polymers PET, and chairman of APR's technical programs, commented: 'These labels serve as a great marketing tool, but they essentially render the container non-recyclable. Sorting technology was unable to identify the resin type of the container if it had a full wrap label, thereby not separating it out appropriately, resulting in a contaminated stream of material.'

Technology partnership

BASF and Smart Planet Technologies

BASF and Smart Planet Technologies are discussing a possible strategic partnership concerning the mineralized coating technology, EarthCoating, for paper packaging applications.

EarthCoating is a sustainable and cost efficient alternative to traditional extrusion applied coatings providing barrier and heat seal performance and focusing on improving the recyclability of the packaging. It is engineered for processing within the traditional paper recycling infrastructure and can be used for folding cartons, detergent boxes, paper cups, paper plates and more. *(Feature story in Issue 4, page 102).*

SmartPlanet Technologies makes paper packaging a recycling possibility

Environment news editor Danielle Jerschefske examines the shrink sleeve recycling debate in more depth at http://www.labelsandlabeling.com/news/features/will-shrink-sleeve-growth-be-stifled-recycling-issues

Liner network expands

Avery Dennison

Avery Dennison has expanded its European waste disposal program by appointing Tramonto Antonio as its partner in Northern Italy.

Shrink label recycling solution

Honest Tea

A perforated cut on the side of the label with instructions for consumers to remove the sleeve prior to recycling is a solution not listed by APR in its Final Report. Honest Tea switched its packaging in 2012 to perforated shrink wrap.

Honest Tea public relations manager Joanna Seiden said: 'We felt that it was important to give our consumers the tools to help make sure the bottle is recycled correctly. By removing the shrink sleeve before recycling, the PET bottle has a better chance of being identified properly by sorting equipment and will help the PET recycling community. We thought the perforated area with the zipper imagery would be an easy way for us to get the message across to our consumers and help keep the bottles out of the waste stream.'

Honest Tea creates multi-serve zip label to help educate consumers about recycling containers with shrink sleeves

Spotlight

New press cuts energy

Precision Press

Precision Press Inc, part of the Taylor Corporation, has announced energy savings of over ten percent, achieved as part of an overall sustainability drive. Precision's modern 213,000 sq ft facility houses over 40 presses, most of which are offset litho for label and flexible package printing.

The company had already reduced its energy consumption by 8 percent, with an additional 3 percent reduction achieved in 2013. 'We have a high electric bill because of the UV and EB curing components on our presses, so reducing that cost is something that we go after in a big way, not only from the sustainability standpoint, but also because it shows up on our bottom line,' says company president Lee Timmerman.

'I'm particularly proud of our company because we are a zero-landfill facility. We've had to work hard to do that. We will not bring in chemistries just because it opens up the process window and makes it easier. We challenge ourselves to operate with chemistry that's safe for our employees, safe for consumers and less volatil e to the environment. Everything is recycled, and what we can't recycle goes to the electric company to be burned as fuel to generate more electricity.'

See feature on Precision Press on p.53 in this edition.

Liner-free products

Heartland Label Printers,

Heartland Label Printers, headquartered in Little Chute, Wisconsin, has developed EcoTech, a family of liner-free label products for VIP labels in the logistics sector.

Young managers

New generation faces future

***Jason Baker** from AC Labels in Sydney and **Pete Holywell** from Supa Stik Labels in Perth, Australia, recently attended both Labelexpo Americas and the Young Managers Congress in Chicago and Michigan. Here are their impressions and observations from the two events.*

Labelexpo Americas

As with every Labelexpo event you always meet with the unexpected, and this one was no different. Perhaps the most significant observation was the depth and breadth of the digital inkjet segment. The digital label segment has been largely developed and definitely dominated by HP Indigo and Xeikon – with good reason, as these technologies have been proven for some time. However with the emergence of digital inkjet equipment from companies like Screen, Domino, EFI, Durst, Epson, Mark Andy and more recently Gallus, it's clear there's a strong belief and financial backing in the future for this technology.

Obviously the investment has been significant and the results seen at Labelexpo were very encouraging. As with any technology a convertor needs to assess the strengths and weaknesses of the technology as it relates to their individual needs and opportunities, and whilst digital inkjet won't be for everyone, we both felt the print results (generally) were to the level that suggest it will have a strong presence over the short to medium term. The early adopters of the pioneering digital technologies experienced a steep learning curve, and this no doubt awaits the early adopters here also, but it will be an exciting space to stay across over the short to medium term.

Automation is not a new concept in our industry however we both felt the focus on automation to be a lot more 'end to end' in concept as distinct from 'press automation'. The integration of MIS with prepress and press operations was widely on display, and this would appear to have a central role for our industry going forward where data integrity and costs of operating are two of our most fundamental challenges.

"The integration of MIS with prepress and press operations will have a central role"

Taking this concept in a slightly different direction, Nuova Gidue won the Global Label Award for Innovation for their Digital Flexo press. This was an interesting concept challenging the cross-over of point of digital to flexo with some great innovation around setting up a flexo press with a common set of eight colors to streamline job by job set-up. The result of a collaboration of seven key industry players including the likes of Esko, Dupont and Flint, this concept of press automation extends back to file and prepress, through to anilox and color control on press. A really interesting concept to check out, and obviously a great collaboration.

Jason Baker, AC Labels

Young Managers congress

The Young Managers congress was held at the University of Michigan and was a really interesting day and a half. The daily cut and thrust of the label industry means you don't often get exposure to the 'University' side of packaging, so the learnings from the day have enabled a better and certainly broader understanding of our industry, and its role in the greater packaging environment.

Dr Joseph Hotchkiss presented on the Future of Packaging, covering the core areas of performance, cost, forms, function, sustainability and design and marketing. With tremendous clarity he put forward the concept that the driver of packaging is to 'improve the cost to performance ratio.' This was supported with some great examples of innovative, value-added packaging, underlining that 'Cost to Performance' doesn't have to mean 'cost-out'.

Dennis Young and Dr Laura Bix presented on high performance labeling and packaging as well as human interaction and packaging. They presented information about the potential for better communication between packaging and end-users. They demonstrated various ways brands are utilizing technology to interact with packaging and customer purchasing behaviours.

They also presented Dr Lockhart's Packaging Matrix, summarizing key considerations across environments and functions, and noted that 'to add value you must look harder and work smarter'. Additionally, it was observed that, 'the shortest path leads to the least innovation' and 'tweaking old designs ensures safe and underperforming designs', which was interesting as we both felt we often find ourselves pushed up against these two barriers to innovation.

The MSU kindly gave us a tour of their School of Packaging and we received a snapshot of some amazing research work they are doing in the broader packaging industry, including RFID and 3D Printing.

It was a great week, Labelexpo was interesting and the YMC was excellent, with tremendous insight provided by the MSU. Catching the Chicago Bears' opening game of the year with a packed house was a bit of fun too!

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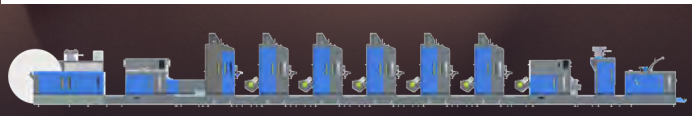

Q&A

Aydin Okay is managing director of Turksih label converter Canpas and president of the Turkish Label Association. He is a central figure in FINAT and a strong advocate of the industry in many regional forums. ***Andy Thomas*** interviews

How many years have you been in the label industry?
I started to work in the industry in February 1974. I started out buying and selling in the retail industry. I sold stationary products, price labels and laser labels.

When did you start the company Canpas?
In 1980 I quit selling stationary products and started to produce self-adhesive labels at my new company Canpas.

You are a strong supporter of the Turkish Label Association – what has your involvement been?
Nine companies founded the TLA in 1998 in Istanbul. Today the TLA has 125 members. The members are from converters of self-adhesive labels, materials suppliers and machine suppliers. Canpas supported the TLA from the beginning of its foundation, though since I was very busy at that time, Canpas marketing manager Rafet Arabacıoglu was there at the founding ceremony. TLA manager Orhan Tuncay was also one of the founders. I have been president of the TLA since my election in 2003 and I have been elected for the next three years.

What is the relationship between the Turkish Label Association and FINAT?
The TLA has good relations with FINAT. When TLA was constructing its organization, FINAT was taken as a model.

"The Turkish Label Association has good relations with FINAT. When the TLA was constructing its organization, FINAT was taken as a model"

Aydin Okay takes a personal interest in all Canpas employees

I have been a FINAT board member for three election periods. Our board member Zeki Murat Sipahioğ lu is on the FINAT printing contest jury. Our member Mehmet ğ engör was a member of FINAT's marketing committee and Amir Sayer was a member of the FINAT technical committee.

TLA and FINAT are also members of National Associations Board formed by FINAT. Other national associations of the board are Germany, Italy, Holland, Switzerland, UK, France, Denmark and Greece.

What are your relationships with other associations in Turkey?

As you know, labels are used in many sectors. We define our sector like FINAT: self- adhesive labels, sleeve, in-mold, digital labels. In this context TLA is one of the members of the Turkish Packaging Federation. This is a platform where we can discuss common issues. The federation members are: ASD – Turkish Packaging Manufacturers Association, AMD – Packaging Machinery Manufacturers Association, ESD – Label Manufacturers Association, KASAD – Cardboard Packaging Manufacturers Association, MASD – Metal Packaging Manufacturers Association, OMÜD – Corrugated Cardboard Manufacturers Association, SEPA – Rigid Plastic Packaging Manufacturers Association, FASD – Flexible Packaging Manufacturers Association.

Also, the TLA has good relations with another two associations – a private label association that encompasses our customers, and the plastics industry association that provides the plastic containers to our customers.

The TLA looks like a very active organization. Can you give me more details?

The TLA produces an industry sector magazine, with three issues a year. We run both a label printing contest and a label design contest, with the winner announced at our annual congress. This is an international congress and includes presentations, tabletops and a gala dinner. We produce books relevant to the sector. For example we translated Mike Fairley's Label Encyclopedia into Turkish at no charge to our members.

We have an educational program, with label sector presentations at relevant schools and universities, as well as running technical industry seminars. We are asked to give expert opinions at the courts – and some government institutions

"When my older son told me from Canada by phone that he was graduated after five years of University education, I was at a seminar on the subject of 'family business"

consult us for our industry expertise. We engage in technical consulting and we represent the industry at the national packaging fair. We also work to increase the number of Turkish participants and exhibitors at the Chicago and Brussels Labelexpo fairs.

What are the challenges faced by the Turkish labels industry?

Turkey's economic growth rate is decreasing. This year's expected growth rate is three percent. Our inflation rate will be close to 10 percent. Turkey also has a foreign trade deficit problem. But while many of European countries had min0us growth rates, Turkey has not gone through a real economic crisis.

"It is hard enough to win an award at a national label printing competition, so we can define these World Label competition prizes as the Nobel prizes of the label sector"

The Turkish label sector grew by three percent last year. The problems of the sector include: the use of materials outside quality specifications; high levels of competition and excess capacity; and a shortage of training and foreign language skills for our industry personnel. In addition, we need solutions for the new environment regulations that are now influencing the labels sector, and we need to increase our exports, which are currently low.

Turning to your own company Canpas, in the last five years what have been your most important machinery investments?
In the last five years Canpas has invested in converting machines that can produce high quality labels and these investments will continue.

How has digital printing affected your business?
To invest in digital is a problem, while not to invest is also a problem. But as time goes on digital will contribute to the sector a lot.

Canpas remains a family-run business. What are the challenges of working with your family members?
When my older son told me from Canada by phone that he was graduated after five years of University education, I was at a seminar on the subject of 'family business'. When the seminar was over I told the speaker about my son and I asked for his advice.

He said there are two ways. After his education is completed, the son can work outside of the company – and then can return to the company; or the son can work in the company and then later can work outside of the company.

My younger son completed his education in England and directly came to the company. My elder son initially worked outside of the company.

How important to you and the Turkish label industry are the World Label Awards?
Winning an award, to be praised, are the sources of pride for individuals and institutions. Also this increases the sector's dynamism. It is hard enough to win an award at a national label printing competition, so we can define these World Label competition prizes as the Nobel prizes of the label sector. This award is the highest level of pride and honor for a person and another motivation factor is the variety of countries that the award winners come from.

The TLA also gives awards every year to the individuals who have made important contributions to the labels industry. The TLA has been giving its own printing awards and lifetime achievement awards for 11 years.

In 2009 I started a new competition at the FINAT congress in Antalya, Turkey, for a logo compatible with the congress theme. This competition continued at the Valencia, Athens, Berlin, Sicily and Monaco congresses. This gave participating schools and universities the opportunity to find out more about FINAT and the label industry.'

Aydin Okay, managing director Canpas and president of the Turkish Label Association at the Galatasaray soccer club general assembly elections, where he was elected council board president

Tell us something about your activities outside business
Outside business – and when I have time after being together with my family and grandchildren – I play soccer. In the last years I am participating in half marathons.

"Outside business – and when I have time after being together with my family and grandchildren – I play soccer"

Galatasaray (soccer) Club is very important for me. As a member of Galatasaray I achieved the honor of performing the second highest level of duty. The first level is being the club president, the second level is being the president of the board council at the annual congress. I carried out this duty on 10th of October 2014.

Also I collect historical pieces, including fountain pens and prayer beads.

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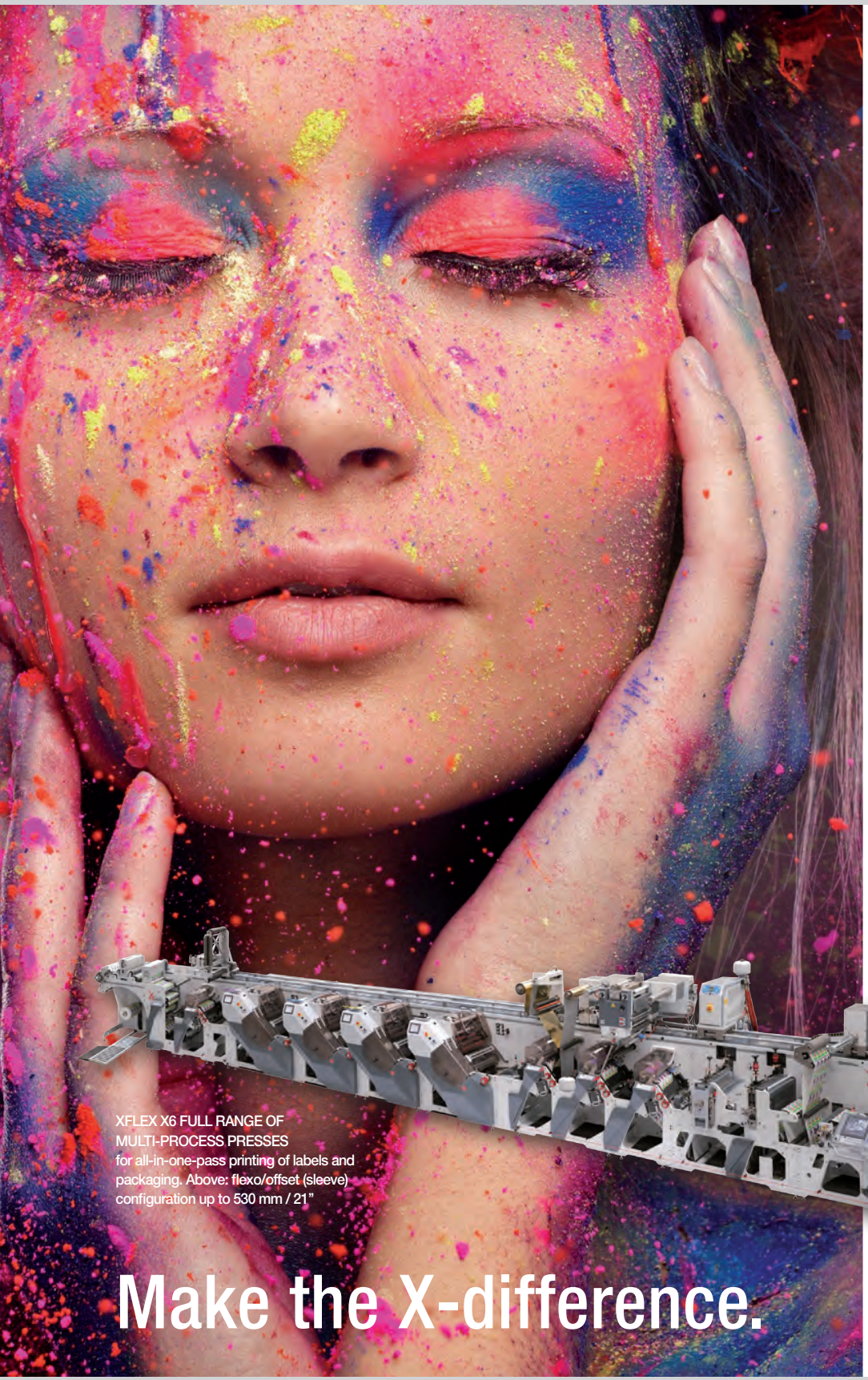

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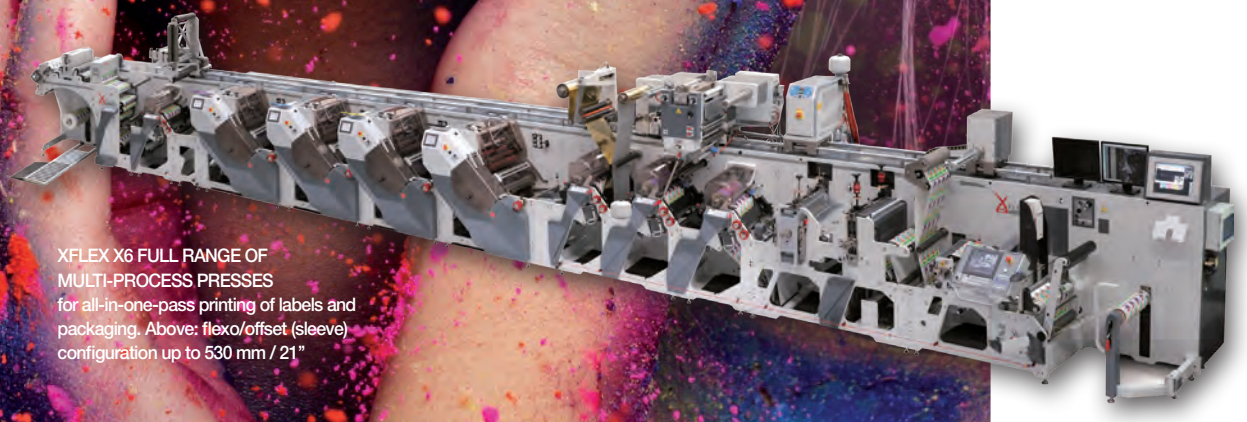

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M&A

Reaping the rewards of a customer focus

Strategies to reenergize customer relationships. By ***Bob Cronin****, The Open Approach*

This time of year, many companies start showing their exhaustion under the continued pressures of the customer. Certainly, these emotions are understandable. In an industry marked by perpetual demand for invention, it's easy to get 'burnt out'. Routine tasks and troubleshooting can overtake enthusiasm. Fall trade shows, truncated holiday schedules, financial wrapups, and other year-end activity can also push the focus away from the customer.

Ironically, it is during these times when your customer may be sick of you, too. And, with both of you sensing the drain, customers can become vulnerable to being snapped up by the competition.

The reality is that you can never lose focus on the customer. Not during busy times, not when they have a lull in workload, and especially not during the holidays when label sharks are circling them with calendars, personalized labeled gifts, and other doo-dads.

Likewise, your customer enlisted you to do their work, and help build their business. They do not have a product to ship, market presence, or loyal following without what you provide with a label. They picked you specifically for what you have to offer. Your label is their brand. Be it a pressure-sensitive warning label; a smart package with expiry dates and trackability; or a foil-embossed, 6-color, die-cut wine label, your product gives customers a voice, an image, and everything that goes with it. Your good customers will stick by you – as long as they feel valued.

Many clients we work with start the M&A process believing they have solid accounts based simply on customer tenure. While length of time is one indicator, be sure to review trending. Are customers increasing their spending with you, or are their sales declining? Have they bought into your newer service offerings, or are they still just purchasing one or two legacy items? Namely, are they helping you grow? The answer to this question could signal a need to reenergize.

So, how do you rekindle the customer relationship? Moreover, how do you ensure their loyalty – and growth – for years to come? Here are five retention strategies to consider.

1 Involve customers in your company

One of the easiest ways to connect with your customers this time of year is to share your holiday festivities. Invite your top 10, 20, or 50 clients to dinners, parties, or even end-of-year employee acknowledgement events to show them that they too are part of your success. Emotions are still a component of client loyalty. Being included in even a low-key gathering shows clients that they are important. Plus, it gives you (management, owner) an opportunity to connect with your customer on a personal level.

Alternatively, host a 'lunch and learn' on a topic pressing to the industry. Your compliance officer could handle content, or you can bring in a rep from an industry regulator or association to lead the discussion. Pick a topic relevant to your customers, and make sure you cover the latest concepts and information. You'll glean more insight on what issues are important to them, and how your company should respond.

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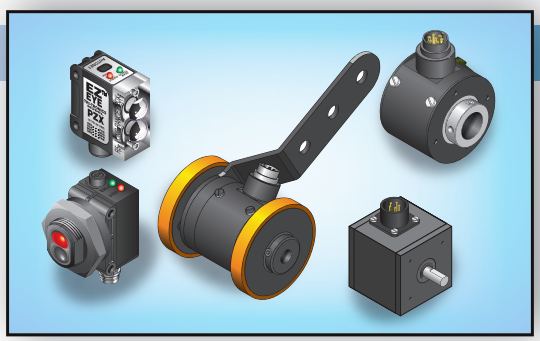

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❷ Do a better job of letting clients know what is available to them

Gone may be the days of demo mailings and sample room showcases, but clients still need to know what products and services you deliver. Not just the ones they use now – but ones they could use in the future. Keep customers engaged with company - driven emails about new offerings, product ideas, certifications, and other key information. Or, if you have the resources, put in place a social media campaign that gets them to 'like' or 'follow' you and receive updates.

Additionally, start bringing customers along to industry trade shows. Seeing the impressive developments, equipment and demos can spark new conversation and ideas – and give you a better sense for which investments will be the biggest hit with your audiences. Customers are the ones who drive change in this market; it makes sense that they understand the many directions and possibilities.

❸ Do a better job of selling value

When customers simply buy a "product," they think of it first by price. If you are selling the same old product through the same old channels, this price-first thinking will prevail.

Label and packaging companies need to make sure they are selling "value" – responding to a market need, improving a product position, or solving real problems.

Your sales force (and marketing personnel) must focus their efforts not on price but on what you can do for a customer. The solutions can be many, but it begins with understanding your capabilities and the needs of the customer. Indeed, the greatest successes in our market have been solutions, not products.

To sell solutions, you need to understand the strengths and weaknesses of both your organization and your client's. This requires a sales force that can sell concepts versus products – a struggle that exists in many operations today. Analyze what solutions you are already delivering to customers, and determine how to repackage them in a general way or for different industries. Solutions are the key to gaining advantage, as they distinguish you best from the competition.

❹ Provide training or tech skills

In addition to mastering the manufacturing equipment to produce labels and packaging, providers need to be proficient in the tools used by the customer. If Adobe releases an upgrade to Creative Suite, or a new 3D modeling software get released, why not be the first to introduce your customers to it?

Invite customers to attend a demo of the new program at your site, or even a hands-on session to explore the new functionality. Use the opportunity to discuss current projects or explore how such upgrades could help them streamline production or solve other problems. Show them what the upgrade offers (or doesn't offer), and you can be a hero in helping them plan their software investments.

Framed as a learning experience, clients won't feel the heavy sell, and you'll be the first one they call when they start a project in the new software.

Alternatively, if you've added new equipment, offer them a glimpse of it in operation. Customers may tire of a sales lunch, but it's hard to turn down an opportunity to learn. Let customers see the new tools or equipment, and get them thinking of how they can leverage your new capabilities.

❺ Treat your customers as your own

Your customers are your lifeline. Just like you do with key employees, you need to nurture your best customers. If you win an award with their work, celebrate them with a plaque of their own. If they meet a five- or 10-year milestone with your company, have a system to honor them. Make sure the accolade benefits both your contact and their company, so that your appreciation is felt by their entire organization.

Likewise, encourage customer suggestions, ideas, and feedback. They indeed are the ones who will drive your success and buildout as you grow into new areas. Herd them, hear them, and heed them – and use their insights to fuel your growth.

Whether employees or clients, people stay loyal to an organization because they feel welcomed, valued, and – ultimately – part of its success. Think through your customer retention strategy, and make sure you are covering all these elements. It's far easier to revitalize a relationship, than to try to bring it back once it's gone.

Bob Cronin is managing partner of The Open Approach, an M&A firm/ consultancy focused exclusively on the world of print. The firm has spearheaded several large label industry transactions, and regularly works with label and packaging companies on M&A strategies, value-enhancement initiatives, and organizational workouts/turnarounds. To learn more about The Open Approach, visit www.theopenapproach.net, email Bob Cronin at bobrcronin@aol.com, or call 630-323-9700.

Book Review

Knowledge Bank

In the 10 years since the first ever Encyclopedia for the label producer and label user sectors was published it has become an established and well-respected international reference source, providing a comprehensive understanding of the technology and terminology for all kinds of label and product decoration solutions.

It included materials, adhesives, printing methods, application technologies, inspection systems as well as the related areas of tickets and tags. It also covered legislative requirements and the growing area of brand protection and security as well as new innovations, including smart labels, RFID, indicator labels and chipless tags.

Now these topics have been substantially updated and extended in the latest edition of the Encyclopedia to incorporate the production of narrow-to-mid-web package printing, the fast-changing world of digital imaging, printing and finishing, digital direct-to-shape and the new technologies of digital watermarking, mobile interactive labels and packaging, as well as the latest converting and tooling solutions and an understanding of printed sachets, pouches, flexible packaging and cartons. More information has been included on the environment and sustainability, and mention made of all the leading industry associations and relevant bodies.

Encyclopedia of Label Technology
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Available in both Kindle and paperback editions

ISBN-10: 1910507008
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L-R: In front of the new Nilpeter FB4200 press: Joe Paz, label production manager, Zetta; Marco Ramirez, flexo manager, Zetta; Juan Pablo Patiño, Andean region manager, Nilpeter; Richard Tasayco, Nilpeter technician; Ronald Wilmers, Nilpeter technician

Pre-press house finds label printing success in Peru

Latin American pre-press house Zetta Comunicadores moved into label production with the installation of an HP Indigo WS6600 last year. Now, with the arrival of a Nilpeter FB 4200, it has added to flexo printing to its operation in Lima, Peru. ***James Quirk*** reports

Zetta Comunicadores, a commercial pre-press house with operations in Colombia, Peru, Panama and Bolivia and part of publishing giant Grupo El Comercio, has installed a Nilpeter FB 4200 to expand its label printing operation in Lima, Peru. The company moved into label production last year with the purchase of an HP Indigo WS6600 digital press.

Founded in Colombia in 1989, Zetta entered Peru in 1995 and set up an operation in Bolivia this year. A strategic partnership with Grupo El Comercio – with Zetta providing pre-press services for the group's newspaper, magazine book publishing empire – was formalized in 2000 when Grupo El Comercio acquired the company.

The new operation in Bolivia is fully dedicated to flexo pre-press. In Colombia, while offset plates for its parent company represent the largest portion of its production, commercial printing is carried out on a KBA Rapida and three HP presses, including a new HP Indigo 10000 installed this year.

It is only in Peru, at its 1,200 sqm facility in Lima, that Zetta has begun production of labels and flexible packaging. The move reflects the changing landscape in the local label sector: the country has seen a flurry of companies moving into label production from different industries *(see L&L issue 5 2014, Kuresa sees changing landscape in Peru, page 73)*.

'In Peru, there is increasing demand for quality labels and packaging in agro-industry, the retail sector is growing and foreign pharmaceutical companies have been moving in,' explains Camilo Sanchez, shareholder and member of the board. 'Combining on-demand printing with long-run capabilities is good for our clients and today's technology facilitates it. We want to offer integrated solutions to our clients so we have put together a modern plant with high-level technology and a special focus on hands-on service.'

The Nilpeter FB 4200 prints eight colors across a 16in web. Features include corona treatment, web cleaning, cooling cylinders, cold foil and an inspection system from BST. An LED curing system is provided by GEW, while soft tension lamination facilitates flexible packaging printing. Thanks to a partnership between Nilpeter and Karlville, shrink sleeve equipment from the latter company was installed at the same time.

Zetta's burgeoning label printing operation is completed by the HP Indigo WS6600, a DC 330 digital converting line from GM, and Rotoflex and CEI finishing systems. The company produces self-adhesive labels and short-run flexible packaging for the food and agriculture sectors, among others.

Pre-press, needless to say, is handled internally, on equipment from Dupont, MacDermid and Esko. Some flexo pre-press work is also carried out for external clients, though not in the label industry.

This long-standing expertise in pre-press has aided the transition into printing, says Camilo Sanchez. 'It has been a challenge to get to know the market and the needs of clients. But we have incorporated all our knowledge and experience into producing quality products. Our creative and technical resources allow us to offer better and more attractive solutions, at competitive prices. And we can offer our clients a variety of printing and finishing options which enhance the shelf-appeal of their products. Every client is different and needs tailored proposals; this requires creativity in all aspects of our work.'

Sanchez describes Zetta's label printing operation as 'an important and growing part of the company's business.

The HP Indigo WS6600 – Zetta's first press for printing labels and flexibles

The illusion of augmented reality

As brands' interest in augmented reality continues to grow, new opportunities are opening up for packaging converters to integrate interactive media into their product portfolio. ***Georgina Saunders*** reports

Augmented reality (AR) continues to push forward into the consumer environment, with a number of brands and products now carrying the technology as part of their multi-channel marketing mix to engage and delight consumers. A recent survey among end users carried out by Cal Poly State University showed 10 percent are investigating AR, with 28 percent looking at QR codes.

A notable recent example is UK confectionery brand Maynards, which launched an AR campaign on its Discovery Patch product packaging to add an 'immersive discovery and learning experience'. Discovery Patch is a range of fruit-flavored jelly sweets, with four separately branded Discovery Patch packs – Animals, BodyBits, Myths & Monsters and Mini Creatures.

Mobile market agency Hi Mum! Said Dad used the Metaio AR engine to create a 'deep and valuable family interaction' that sees children, guided by their parents using smartphones, tasked to find 3D character pieces placed around their environment, read the clues and guess what they have found. The interaction is led by a call to action featured on the front of the packs. Each of the four pack types features a different AR experience, so offering multiple user interactions and helping generate brand loyalty through repeat purchasing.

Lizzy Huelsmann, senior brand manager of candy at Mondelğ z International, which owns the Maynards brand, said: 'We think the fun shapes and delicious taste will make it something that families will love, giving their imagination something to chew on. Mums have told us that they think the product will be great for the whole family – they think it's a really different product and love that it helps them spend more quality time together while developing their children's learning and creativity.'

Craig Wills, managing director of Hi Mum! Said Dad, says the idea of discovery and interaction is central to the Discovery Patch brand.

Data collected from the campaign shows it has been a success, with interactions occurring after school and after meals when parents are most likely to engage with their children. The data also shows multiple interactions by single consumers as they look to experience each of the different AR environments offered by the Maynards campaign.

Wills notes that the call to action on the front of the packs is essential to ensuring this level of response takes place, as consumers still need reminding and prompting about the AR experience on offer. 'I think it's still a big stretch of the imagination to expect consumers to remember an advert or other piece of marketing collateral that they saw a few days ago and link it to a product that is in their hands.'

"Poor AR executions are all too easily found, such as those requiring the image marker to stay in the same location throughout the interaction, so ruining the consumer experience"

He likens this to the early days of QR codes, when there were some poor executions of the technology that put consumers and brands off. In AR, poor executions are all too easily found, such as those requiring the image marker to stay in the same location throughout the interaction or those that have too easily 'dropped' the marker, so ruining the consumer experience.

'We are showing that AR can have a valuable presence for consumers and have proven QR can work,' Wills says, referencing a project Hi Mum! Said Dad undertook with confectionery brand Cadbury, also owned by Mondelğ z International, to trigger a 'moment of joy' – including video content, animated gifs, recipes and other interactions – directly from the packaging.

'These are fleeting, yet considered interactions and not meant to be deep, but again the success of the initiative was backed up by the purchasing and consumptions patterns we were able to record.'

Jason Higgins, director of mobile technology at AR platform developer Nth Degree Imaging, says one element of his company's work is a further development of QR codes to bridge the physical and digital worlds.

'We have a group of customers looking at seeing an item being taken on a journey into the digital world. AR is about supplementing what you're seeing with what's interesting and informative.'

For Wills, data collection is an important element of the QR/AR story, as it allows brands to see that the technology is working for them and providing a return on their investment. AR is also being made an easier sell by the evolution of the technology itself, with the engines now more accurate and better able to cope with variations in their environment, such as reflective materials, creasing and rounded surfaces.

'The technology has developed hugely, but brands and agencies need to come up with more meaningful executions to provide a benefit to the end-user; seeing a 3D image pop out of a flat surface is no longer enough and AR can do some really interesting things.'

The next move forward will come from 'depth sensing' devices, including the Occipital Structure Sensor, expected to hit the market in early 2015. This technology can 'see' the world in 3D via what are known as RGB-D (red, green, blue + depth) sensors, and the latest version of Metaio's flagship SDK will support depth sensor input from these devices.

'Smartphones and tablets have historically made use of single, 2D cameras primarily intended for image capture', says Metaio co-founder and chief technology officer Peter Meier. 'With the ability to understand depth information, mobile devices will become significantly more powerful when it comes to AR and computer vision tasks. Knowing that the likes of Google and Intel are heavily investing in depth-sensing camera devices, we made sure our SDK is prepared for the next big surge of innovation that this hardware provides developers.'

Packlinc – owned by leading UK repro house Reproflex 3 – is another system provider offering enhanced consumer engagement through app-based technology. The Packlinc system transforms existing packaging into a digital gateway to the online world, engaging consumers with media experiences such as videos, social media, competitions, promotions, feedback or further product information – with one simple scan.

To achieve this, a unique code is embedded into packaging graphics which, when scanned, starts the interaction between the physical and digital worlds.

The Packlinc Community analytics portal is a fully functioning data capture tool to provide the ROI Wills and Higgins talk about, and gathers real-time data to give instant feedback and information about a brand's audience and its engagement with packaging during a live campaign.

UK press manufacturer Edale used the Packlinc system at Labelexpo Europe 2013 to provide information on its machinery range, while a number of exhibitors at the recent Packaging Innovations event in London, showed real-life packaging examples. Reproflex3 demonstrated its Pom-Bear snack packaging, which

Cartons that move you

Rondo-Pak, a specialist supplier of folding cartons for the pharmaceutical industry, has brought to market a new concept that it says has the potential to revolutionize at-home healthcare delivery.

The company has developed a carton that can be equipped with multimedia consumer engagement features including a thin, lightweight HD video screen – complete with sound – integrated into a standard or custom-designed carton.

The development was spearheaded by president and chief operating officer Victor Dixon, and is intended to harness the power of digital media for point-of-purchase or point-of-use consumer messaging, not only to gain consumer's attention but also to hold it.

The insertion of the in-carton HD video screen is integrated into Rondo-Pak's finishing processes. Videos can be uploaded with a wide range of useful data, including instructions for use, information on complementary therapies, customer support options and FAQs. Alternate languages are another possibility.

Rondo-Pak's multimedia cartons are available in a number of different configurations, including with a touchscreen interface or with videos that launch when users press a play button. They can also be configured for the video to launch when the carton is opened. Power is delivered by a small internal battery as part of the insert, which can be recharged via USB connectivity.

Rondo-Pak's current multimedia carton offering already includes digital watermarks on the outer packaging, enabling consumers with smart phones to access additional product information or special offers at the point of purchase or use.

Digital watermarking was introduced by Rondo-Pak earlier this year, utilizing mobile technologies to connect packages and other printed materials to interactive experiences on consumers' smartphones without taking up valuable print real estate on a package, as would be the case with a 2D or QR code.

'Rondo-Pak's multimedia cartons are the next generation of packaging,' says Dixon, 'especially for products whose directions for use are more critical, as is the case with a growing number of pharmaceutical therapies, medical devices and in-home diagnostics kits. Benefits include everything from easier-to-follow instructions to interactive experiences that would have been impossible just a few years ago.'

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Left: Mobile market agency Hi Mum! Said Dad used the Metaio AR engine to create a 'deep and valuable family interaction' that sees children, guided by their parents using smartphones, tasked to find 3D character pieces placed around

Right: Hardware will be the key to unlocking the potential of AR

dates back to Halloween 2013, where multi-bag packs featuring Packlinc were available across the UK retail environment. This invited consumers to find an invisible 'ghostly code' via the Pom-Bear Facebook page. The project received a gold innovation prize at both the EFIA Print Awards 2014 and Starpack Awards 2014.

Beyond brands

It is not only brands that are capitalizing on AR. Both CS Labels and Tyler Packaging have added AR to their capabilities this year.

CS Labels introduced AR, running on developer ooh-AR's engine, earlier this year, to add a new dimension to its print offering. Explains company managing director Simon Smith: 'You can prompt customers for product feedback, encourage them to join forums, surf the net and even request a quote or buy products and services, all from their device – all without any compromise on the look of your product. You can also collect analytical user data or opt-in details if the customer provides it.'

To achieve this, CS Labels creates branded apps for customers, downloadable from Apple's App Store and Google Play. Anyone who has downloaded the app can use their touchscreen device to find out more, give feedback and even make purchases through an interaction triggered by a label.

Examples of this product in action include a project with Twinnings tea. The brand's high-end products - where different blends are individually crafted – are linked via AR-enabled packaging to the company website, where consumers can find more information on how and why the blend was created.

'At the moment, people are a little hesitant of the technology, but our customers are starting to see where it is going, realize the potential to enhance their profits and understand what it can do for a brand,' says CS Labels sales manager Nathan Daniel.

Tyler Packaging has also introduced AR as a way to augment its printed offering, seeing the potential to develop new packaging designs before they reach the retail environment.

Its AR suite is intended for use in the design and prototyping stages, so allowing customers the opportunity to visualize and scrutinize packaging from all angles before the product becomes a physical reality.

Tyler Packaging technical and sales director Adam Kay describes AR as allowing the company to 'take the next step' in terms of presenting a virtual model to customers.

'This is a natural progression of the design process,' says Kay. 'It allows our designers to respond to customer queries, suggestions and ideas much quicker than before. It also allows quick and simple versioning as it is all carried out digitally, so multiple variations of the same packaging can be delivered through a single interaction.'

Consumer evolution

Craig Wills says the future for AR will be heavily linked to how consumers evolve and adapt to having this technology at their fingertips – much the same as QR codes.

'At the moment, the average consumer doesn't know much about AR, but this will change. It was the same with QR but this is no longer the case, especially as handheld devices with native readers became the norm.'

Devices featuring native AR readers are starting to hit the market, such as the Sony Xperia Z2, but this technology will need to permeate across the whole hardware manufacturing base to help brands realize AR's potential.

'The technology isn't ubiquitous enough yet for brands, and not showing enough return on investment by driving sales and repeat purchasing just yet. Deeper penetration will help brands justify their investment.'

'Technology can sometimes feel alien when it is first introduced,' says Jason Higgins,' but quickly becomes natural. Tablets have revolutionized the way we consume broadcast media, but email was a much harder sell when it was first introduced. Now it's ubiquitous. These technologies and processes are very easy to pick up once all the components are in place, and AR is on the verge of that.'

"3D and AR will become an ever-more integral part of the packaging design and development process as the next generation of professionals come through"

Tyler Packaging's Adam Kay sees a similar story evolving in the production environment, as future packaging designers and professionals will view such technologies as second nature.

'I am convinced that 3D and AR will become an ever-more integral part of the packaging design and development process as the next generation of professionals come through and expect to have the same tools that they are exposed to in their personal lives available to them in a professional setting.'

5G data networks offer potential for both consumers and industry, and may enable the development of new technologies including augmented reality and connected cars, according to a new report – GSMA Intelligence

AR system developer Blippar has acquired Layar, a 'key pioneer in bringing AR to mobile devices since 2009' – Labels & Labeling

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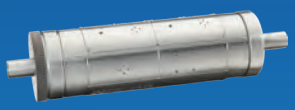

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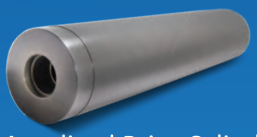

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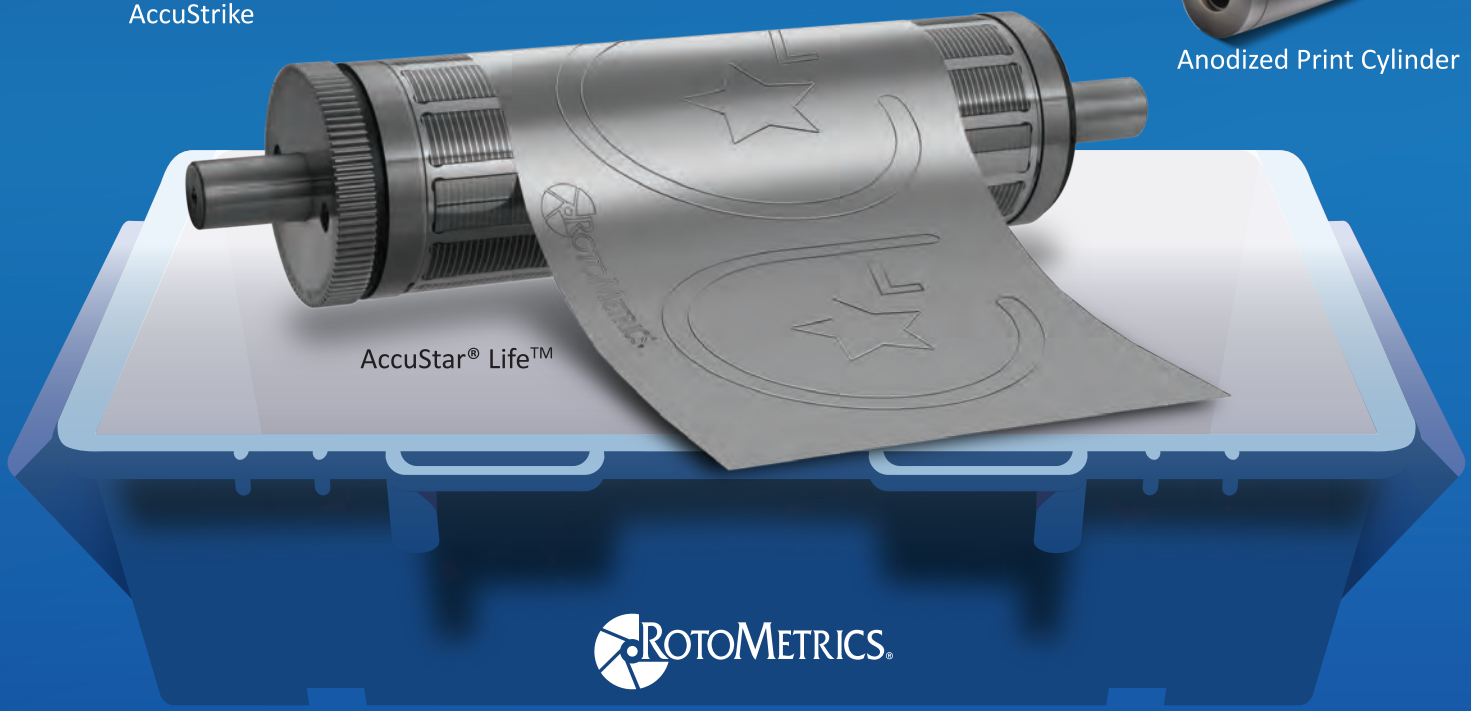

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The EtiCont team, with third from the right, company owner Paolo Cattaneo and his son Marco 2nd right

First Omet JetPlus makes mark

Eticont-Cattaneo Paolo Grafiche is the first converter worldwide to install Omet's JetPlus combination UV inkjet/flexo press. ***Andy Thomas*** reports.

Eticont-Cattaneo Paolo Grafiche provides a perfect example of a commercial printer moving into the more profitable business of label converting.

The company started life as a printer of high quality books – a business that continues to this day. Ten years ago, turnover in the books market was falling, and company owner Paolo Cattaneo started looking at new opportunities.

It was a suggestion from a fellow entrepreneur, Omet founder Angelo Bartesaghi, which made him look at labels. When L&L last visited in 2005 it was to see the first Omet press installation in a brand new building dedicated to self-adhesive labels production, managed by Paolo's son Marco. Marco has full management control over the EtiCont Srl division.

EtiCont was already printing business forms and continuous stationary, but today is fully dedicated to self-adhesive label conversion. It is accredited to the ISO 22000 food grade standard.

The first two presses installed at EtiCont were 2-and 8-color Omet Flexy machines. In 2009, with the labels business taking off, a 430mm-wide 8-color Omet XFlex X6 was installed. Last year the decision was taken to add the Omet JetPlus combination flexo-digital press – the first machine to be installed anywhere in the world.

Combination digital press

EtiCont's JetPlus is built on an XFlex X6 press chassis with six flexo stations – four in front of the 4-color UV inkjet unit, and two after. The press line starts with servo unwind, web guiding, web cleaning and corona treater. The converting section includes cold foil, lamination and Omet's Monotwin Cut format-free flexible die cutting station. The press uses GEW lamps with a chill drum after the digital print unit.

"EtiCont's JetPlus is built on an XFlex X6 press chassis with six flexo stations – four in front of the 4-color UV inkjet unit"

'The press gives us maximum flexibility,' says Marco Cattaneo. 'We can print in digital then flexo varnish,

Four flexo units before the digital unit

"We are testing hybrid printing and trying to understand what are the advantages of combining digital and flexo print"

"The digital unit is particularly effective on multi-variant label designs where the material and format remain the same"

or print flexo then customize. Digital is very economical for short runs because there are no plate costs, and the time to start production is very short. So for some enquiries we can offer next day delivery.'

The digital unit is particularly effective on multi-variant label designs where the material and format remain the same.

'Another advantage is where the customer asks for a partial delivery in advance, then if they order is of 100,000 labels we can complete it in flexo,' says Cattaneo. Another job seen by L&L involved 100 different label designs, each with less than 1,000 pieces and incorporating 30 different kinds of barcode.

'The plate cost alone for this job would be 4,000 Euro.' Another job showed the use of digital printing followed by in-line cold foil.

Two presses in one

The JetPlus UV inkjet unit was designed by Omet in partnership with Domino, and uses the same 600dpi Kyocera inkjet heads found in Domino's N610i digital press. This allows EtiCont to take advantage of Domino's extensive pre-testing of a wide range of label materials, with color profiles held on the JetFlex controller.

Above: The Omet JetPlus combination digital-flexo press

Below left: The Omet XFlex X6 press

EtiCont thinks of the JetPlus as two separate machines – a digital press and a conventional UV flexo press. 'We are testing hybrid printing and trying to understand what are the advantages of combining digital and flexo print,' says Marco Cattaneo. 'This is useful when you already have the plates for one kind of label and the customer asks you to change only the text or image. You could then print it in flexo and overprint digital.'

An example is a job for the Gran Bria brand, printed with a yellow flexo background then digitally overprinted in-line on film stock. Jobs have also been printed on metallic paper using a flexo white as a first down before over-printing with digital.

The press is fitted with two camera systems: one for digital, just checking the print to die cut register; and Omet's full Vision-2 inspection and register control system when printing conventional flexo.

When the JetPlus is running as a 'digital' press, changeover times are dictated by how fast the finishing units can be changed. Omet's Monotwin Cut die cutting unit helps here, because the die cutting format can be changed without changing the cylinder – only the flexible dies need to be changed. The unit uses servo drives to synchronize the rotation of two magnetic cylinders, so that each unit cuts alternate impressions. 'This is another piece that helps you change jobs faster and with less costs,' says Marco Cattaneo.

'Digital is a complementary printing method to flexo,' concludes Paolo Cattaneo. 'But you do need it in order to offer the customer a complete service. Now we could not do without digital.'

Has the digital press changed customer behavior? 'Most customers don't need to know, and are not interested to know, how a job is printed. They look at quality and price.'

For Paolo Cattaneo, Sustainability is not simply a marketing slogan. The company has installed solar panels on its roof and constantly monitors the energy this contributes to its plant, along with the reduction in CO2 emissions

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Heidelberg-Gallus launch digital converting system

The first practical result of Heidelberg's new digital press strategy is a digital converting system developed jointly with Gallus and FujiFilm. ***Andy Thomas*** reports

Gallus and Heidelberg have jointly unveiled the prototype of a digital press that uses FujiFilm 1200dpi inkjet heads to print at speeds of 50m/min in up to 7-colors plus white. Conventional modules are only used for web preparation, embellishment and finishing.

The Gallus DCS 340 press was shown at Gallus' Innovation Days event, which also included key announcements about future conventional press developments.

The DCS (Digital Converting System) 340 is built around a Gallus ECS 340 'granite' press frame. The DCS 340 press is fully modular, and at the launch event was configured with servo unwind, web cleaning and corona stations, two UV flexo print heads, DOD inkjet module, flexo UV varnish, semi-rotary die cut, slitting and rewinder.

Up to 64 Fujifilm Dimatix printheads, each delivering a drop size of 2 picoliters, are deployed in the inkjet module. These are the same heads used in the FujiFilm Jet Press 720 B2 sheetfed press, but adapted to handle UV inks. The prototype Gallus DCS 340 was configured to print in up to six colors (CMYK, Orange, White), but will show its full gamut range with additional Green and Violet, when the press is launched at Labelexpo Europe 2015. It combines LED-UV inter-color pinning with a combination of both LED-UV and mercury lamps for final cure.

The DCS 340 press is driven by Heidelberg's Prinect digital front end, which will be common across the new generation of Heidelberg digital press systems developed with FujiFilm. The DFE will handle workflow automation and color management, including spot color matching.

AVT demonstrated a new quality assurance technology integrated into the Gallus DCS 340 press control system. Features include real-time print quality monitoring and continuous detection of missing, deviating or weak printing nozzles. The AVT system can be expanded to include color control, verification of geometric parameters like color-to-color registration and image placement. It can monitor both static and variable content, classify possible print defects and initiate corrective actions.

Rapid prototyping

The Gallus DCS 340 short-circuited Heidelberg's usual lengthy development process, moving from concept to prototype in less than a year, guided by Jason Oliver, Heidelberg's recently appointed senior vice president Digital Print. As former leader of EFI-Jetrion's European operations, Oliver has plenty of knowledge of the requirements of the digital label and packaging markets.

The final version of the Gallus DCS 340 is expected to launch at Labelexpo Europe 2015 at a price around €1.4-1.5m in this configuration.

Heidelberg will manufacture the inkjet unit at its Wiesloch-Walldorf site, while the flexo and converting units will be produced at the Gallus plant in St. Gallen, Switzerland.

The press will be sold by Gallus' worldwide sales network, but technical service representatives from both Gallus and Heidelberg will be trained in maintenance and support.

Inks will also be supplied through Gallus' sales and distribution network. Heidelberg is working with as yet un-named ink developers on proprietary UV inks optimized

for the FujiFilm heads. Low Migration inks are also under development.

Heidelberg digital strategy

Heidelberg CEO Gerold Linzbach confirmed at the Innovation Days event that the Gallus DCS 340 represents the first step Heidelberg's new digital press strategy.

Linzbach explained how the culture at Heidelberg had changed since his two years at the helm. 'We have tried digital technology in a variety of ways but not too successfully. One year ago we decided to re-enter the digital arena with our own product and decided to look to technologies which were proven but which needed to become industry grade.

'We had another habit - to do things ourselves. But this time we looked for partners who have more experience than we how to introduce these product features. To come up with good product is only half the equation – the other half is go to market. So we launched our first product with our partners Gallus because the company has the base technology into which we could fit the digital unit and has go to market expertise.'

Linzbach confirmed Heidelberg is working with FujiFilm to develop a digital sheetfed press for commercial print and carton applications. Jason Oliver adds that a flexible packaging press is another strong possibility: 'The additional width only presents a small challenge, but substrates are a big challenge. FujiFilm's water-based inks are great for cartons, but for flexible packaging you need a hybrid ink. We are working closely with FujiFilm on ink developments and yes, flexible packaging is a very interesting market for us.'

Heidelberg completed its takeover of Gallus in the summer, having held one third of the company's shares since 1999. This makes Ferdinand Rüesch, former owner of Gallus Holding AG, Heidelberg's biggest individual shareholder.

Above left: Klaus Bachstein, Gallus Group CEO, with new DCS 340 press

Above right: L-R: Stefan Heiniger COO Label Business Gallus; Gerold Linzbach,Heidelberg CEO; Ferdinand Rüesch

Below: Gallus RCS with metallic doming unit

'It was the right time to take this step,' said Rüesch. 'All the players in the industry are facing enormous challenges and digital is the future not only for Heidelberg, but for Gallus. As the leader in narrow web printing it is Gallus' responsibility to not just go along with the market, but to change it. Our future competitiveness means we have to show integration of the newest technology, and together with Heidelberg we will develop the best inkjet printing technology available on the market.'

Added Stefan Heiniger, COO Label Business at Gallus, 'Continuing growth in short-run label production and personalised, versioned labels, means we are seeing investment on the market steadily shift towards printing presses that utilise digital printing. The growth potential for this printing method is considerable and we expect to see high growth rates over the next ten years.'

Explaining why he thought the digital converting system concept would work, Heiniger said: 'with this digital technology with the print quality of offset and a production speed which does not slow the press, combined with special effects not yet possible in digital. And we can print digitally on a wide variety of common substrates which was not the case in the past.' Another factor is the ability to combine digital and conventional workflows through the Heidelberg DFE, said Heiniger.

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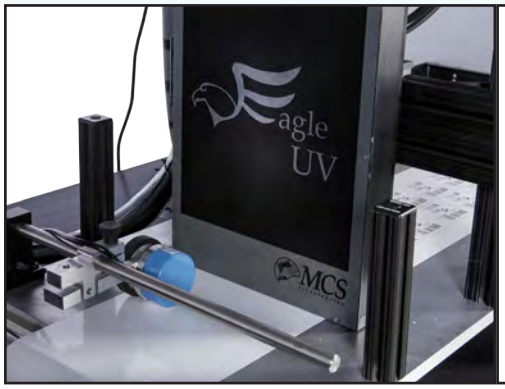
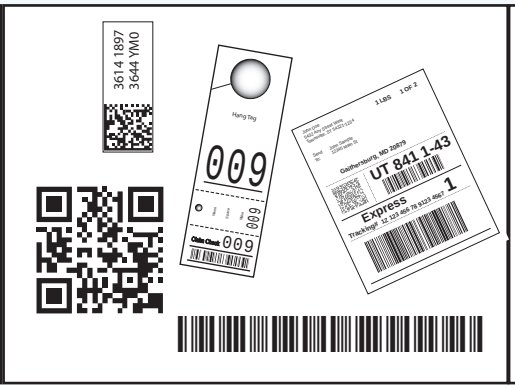
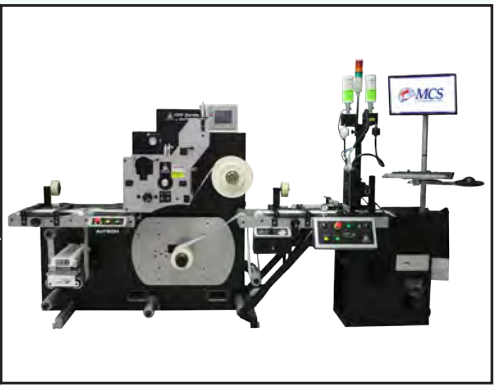






New high speed matrix rewind on Gallus ECS340

Digital legacy

Although Gallus is known as a powerful 'heavy metal' specialist - first in letterpress, then offset and flexo - the company does have historical experience in digital printing.

As long-term L&L readers will recall, Gallus first went down the digital press route back in 1997 in partnership with Indigo. The Gallus-Indigo DO330 did not sell well, generally reckoned to be over-engineered and too slow, mounting an early version of the Indigo Omnius color engine. It did offer 7-color printing, however, and had a dedicated user base.

The Gallus DCS 340 in many ways represents a continuation of that concept – Gallus web handling expertise married to the latest in digital print technology.

Conventional investment

The launch of the Gallus DCS 340 somewhat overshadowed some very important announcements on the future direction of Gallus' conventional print technologies. The Innovation Days event showed the company is once again investing heavily in its conventional press systems, now with Heidelberg's backing.

New on the Gallus ECS 340 'granite' press platform is a high-performance matrix stripper. Using a path roller to guide and support the matrix over a short distance means fewer matrix tears and allows complex die-cutting formes – with recessed edges, for example – to be handled. Gallus' Niklaus Amacker demonstrated converting a complex label shape with a tamper-proof perforation at speeds up to 100 m/min. 'The key is to maintain constant tension.'

The new matrix stripping unit comes as part of a 'plus' package for the Gallus ECS 340. Other 'plus' elements include a Rotascreen Screen printing unit along with a more powerful UV drying system; a secondary rail system allowing laminating and cold foil modules to be positioned anywhere on the machine; and a new front-loadable unwinding/rewinding module and film kit to speed reel changes for both self-adhesive and unsupported filmic substrates.

A software update will bring a number of benefits, including higher maximum machine speeds up to 165 m/min with dynamic pressure adjustment, print register pre-setting when the machine is not in operation, and optimized winder curves. Job information can be stored on the press.

The Gallus ECS 340 'Plus' update package also sees the first introduction of Gallus' new touchscreen user interface, which will become standard across all the company's machines including the Gallus EM S and RCS ranges. For converters with multiple Gallus machines, this should simplify operator training, and means staff can move between presses more easily. More spare parts will be interchangeable, making servicing work more straightforward.

Gallus RCS line revamp

The all-servo Gallus RCS press line was launched 14 years ago at Labelexpo Americas and remains the company's top of the range machine. *L&L* was given an insight into the 'complete revamp' now underway on the new RCS 430 press, which should be ready in time for Labelexpo Europe next year.

According to RCS product manager David Baumann, user feedback will lead to improvements to web transport, a higher register accuracy – to a tolerance of 0.05mm - and optimised offset inking units for enhanced color stability. Remote ink key adjustment will be easier and faster, for example. The new press is expected to have a 15 percent shorter web length and other features to reduce setup time and waste, along with the new operating system already launched on the Gallus ECS 340 Plus update package.

Process automation will be key to the future RCS machine concept, as Gallus finds ways to integrate QuadTech's closed-loop color measurement and control systems following the two companies' strategic alliance.

QuadTech's SpectralCam technology showcased at the Innovation Days event provides automated, in-line, closed-loop color control, adjusting ink keys on-the-fly and at full press speed to maintain specified color targets. The system can be either fully automated or can alert the operator for manual adjustments to be made via the press console. SpectralCam can handle translucent, transparent and reflective films.

The Gallus RCS 430 will be able to alert the operator when a targeted number of 'good' labels have been printed and to communicate with the rewinder for automatic identification of defective labels.

Metallic Doming

Gallus Rotascreen demonstrated its new 'Metallic Doming' process, which for the first time can be applied to filmic substrates as well as paper. The process, demonstrated on a Gallus RCS 330 offset press, involves printing the image area with a UV-activated adhesive using a rotary screen unit. A metal foil is then laminated onto the screen-printed area, creating a raised metallic area up to 1.5mm high.

Gallus' metallic doming process – developed in partnership with Kurz - enables users to apply a metal relief effect on any transparent self-adhesive material or tube laminate, as well as standard self-adhesive paper substrates.

On the same press, AVT showcased its new Helios S system, which is able to inspect these kinds of thick embossed metalized substrates as well as highly reflective holographic foils and laminates.

Gallus Screeny Advanced (A-Line) and new consumables

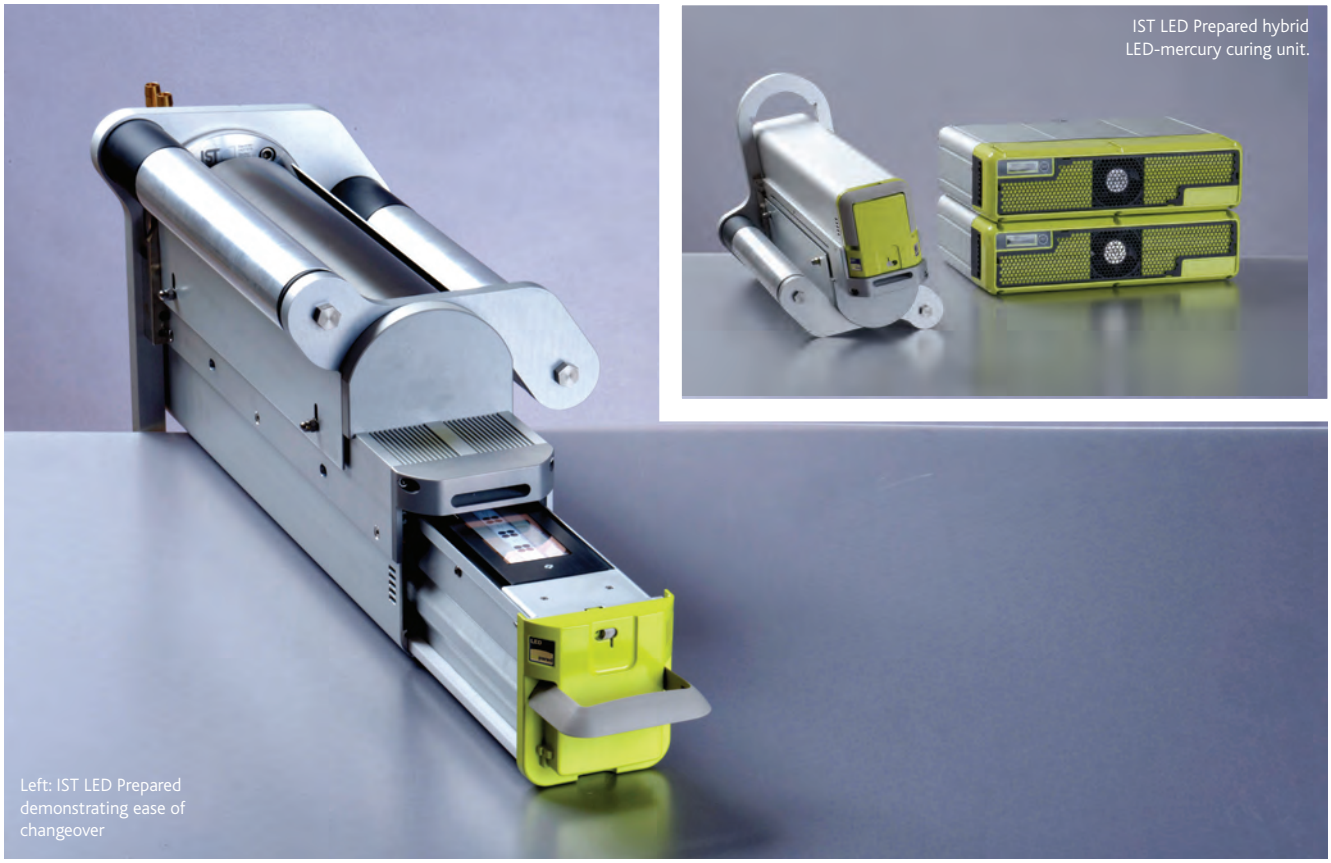
Gallus announced a new, more robust generation of Screeny plates, designed the A-Line, which can be reused more often while retaining ink flow performance.

Gallus has embarked on what it calls the 'Tempo 120' project, which aims to increase press speeds to 120 m/min when using rotary screen printing.

The company also announced the availability of the Twinlock printing cylinder with an adhesive coating which eliminates the need for adhesive mounting tapes and reduces print pressure to prolong plate life.

The Twinlock coating is available in various thicknesses on both synthetic sleeves and aluminium cylinders.

Gallus now offers three different doctor blade types for its presses. They are supplied in a practical cardboard dispenser box and are pre-cut to the dimension of the relevant machine.



IST LED Prepared hybrid LED-mercury curing unit.

Left: IST LED Prepared demonstrating ease of changeover

LED-UV debate hots up

UV curing specialist IST's annual round table event showcased the latest developments in LED-UV and the arguments for and against its adoption. ***Andy Thomas*** reports

The complexity of implementing LED-UV curing on a conventional narrow web press was the main theme of a symposium organized by curing systems specialist IST at its HQ and production base in Nürtingen, Germany.

Taking part in the comprehensive Q&A sessions alongside IST were ink specialist Siegwerk; LED curing specialist (and IST strategic partner) Integration Technology Ltd (ITL); and Chromos, which represents a number of press manufacturers.

IST managing director Dirk Jaegers kicked off the event by sharing the results of an exclusive survey carried out by Klemens Ehrlitzer with leading suppliers and converters, which demonstrated a degree of caution about LED-UV.

Gallus demonstrated LED-UV curing on an EM280 press on the Siegwerk stand at Labelexpo Europe, but Gallus product manager Martin Kast said cost remains the key issue: 'As soon as LED-UV will have noticeable economic advantages over conventional arc lamps, we are convinced that LED-UV systems will gain in importance and that a big amount of new machines will then be equipped with it.'

Nilpeter's Torben Rasmussen said it is 'too early to develop dedicated machine types that are based on LED-UV', while Bert van den Brink from MPS said hybrid solutions are probably the near-term solution, alongside either standard UV or hot air drying systems.

Andreas Rascher from Zeller+Gmelin echoed this caution: 'In our opinion, LED-UV technology in narrow-web printing is practically non-existent. We don't know any web printer using this technology. Wherever interdeck dryers are needed, LED-UV is not considered because of the high costs.'

Flint Group has been a major cheerleader for LED-UV, working with Mark Andy to commercialize the company's Pro-LED system. Flint Germany's Günter Schneider predicted that future ink systems will work with both LED and mercury-doped lamps. 'Today this can already be realized with flexo varnishes – one coating system for both applications. The difference in prices will equalize very quickly. LED inks will be available at the market prices of UV standard inks in the future.'

IST also surveyed leading German label converters. Dominique Elsen of Rako Etiketten said: 'Chances are very good that LED-UV technology will establish itself in the future, but the breakthrough won't come as fast as anticipated. Since an LED-UV machine today still sets too many restrictions, it will be limited to special application areas. Hybrid systems with conventional lamps are technically

interesting, but in most cases not in an economic way.'

Uwe Refflinghaus at Gewa was in broad agreement: 'At the moment I think it is too early and the technology is not yet sufficiently developed to risk the change. Just like many of our colleagues, we use many different printing processes and presses. Products that are produced on this press today, can be produced on another one tomorrow due to time or capacity constraints. It is vital to manufacture a label in consistently high quality for the customer.'

Market trends

IST's Stefan Feil looked at wider LED-UV market trends. Feil said LED unit costs have decreased, but are unlikely to fall dramatically since there is limited competition between a small number of chip producers, and print remains a niche market with limited demand.

Feil emphasized the complexity of the energy equation. Although LED-UV systems do not emit IR-spectrum heat to the substrate, they generate a lot of heat on the back of the array, which has to be dissipated by air or cooled water. The heat to be taken away increases with the size of the array. Indeed, Feil said that as much as 70 percent of the energy generated by the LED has to be taken away by water or air-cooling.

'You need to compare the final cured product before you can make energy saving judgments about LED – there is a lot of confusion in the market.'

Feil pointed to the significant advances in energy efficiency made by 'conventional' curing systems. The 120W output generated by IST's latest MBS-6 lamphead and ELC-X6 power supply, is the equivalent of a last-generation 200 W/cm lamphead.

To highlight these sustainability savings, IST has launched the e3 (Energy Efficient Equipment) symbol for equipment which uses less energy than its predecessor. The first products to receive the label will be the MBS-6, BLK-5 and new sheetfed equipment.

The MBS-6 was recently awarded the DGUV safety test certificate – the first product in its class to receive this certification – and has been graded as energy efficient by the German Professional Association for Printing and Paper Processing.

LED Prepared

For converters looking for a low risk way of testing LED-UV in their existing presses, IST has developed its 'LED-Prepared' lamp unit. This allows printers to swap between an MBS-6 mercury curing unit and an LED-UV array within the same housing. There is no additional upcharge for the LED Prepared unit - indeed all MBS-6 systems produced from the beginning of this year are LED prepared.

The LED Prepared unit can take advantage of existing water cooling systems on the press.

Currently separate power supplies are required for LED arrays and mercury UV lamps – arc lamps use AC current and LED DC – and changing between power supplies accounts for some downtime. IST is working on a common power supply which would allow converters to change between the two technologies in just two to three minutes.

Feil said that it currently makes 'no sense' to place LED-UV curing on all print units, and research work at IST has concentrated on hybrid applications using the flexo press installed at its testing center.

A typical test conducted by IST involved curing a white ink with LED-UV using a 120 W/cm, 12.9 cm3/m2 anilox. With its longer wavelength, LED penetrates the thicker film with minimum thermal impact at speeds up to 150m/min.

While a single LED-UV lamp is generally fine for inter-deck curing, conventional UV is still used for the final cure –a double LED unit is required for equivalent curing power, said Feil.

IST's Joachim Hildebrandt looked more closely at LED developments: 'In the last two years LED efficiency has increased from 10-15 percent to over 20 percent. And IST is developing new lenses which focus the 385nm LED energy better, so less chips have to be used. This helps to offset the greater cost of LED lamps.'

Theoretically, a press built specifically for LED could have a number of interesting design advantages, said Hildebrandt: 'It could be smarter, shorter, as the units are more compact, and you don't have to use chill drums.'

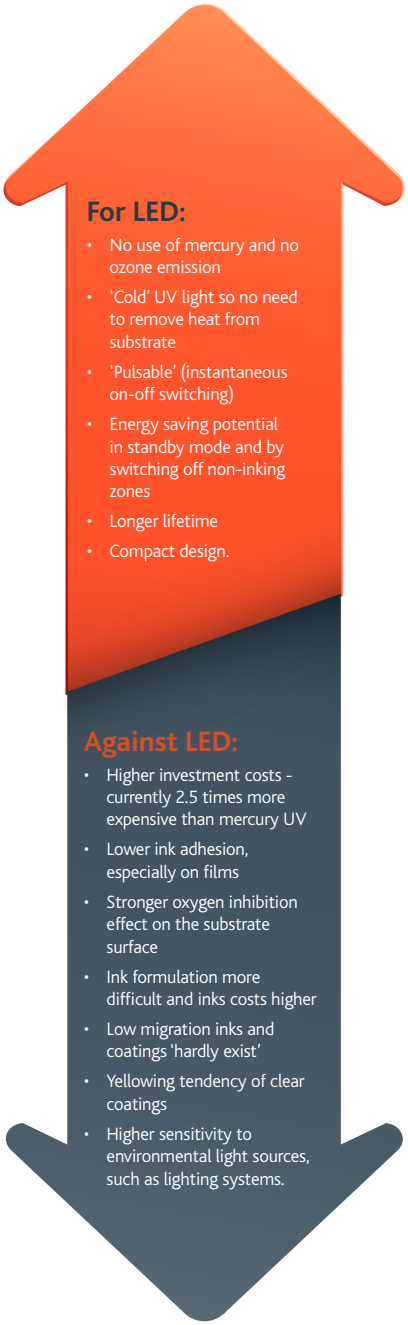
LED specialist

Founded in 2000, Integration Technology Ltd (ITL) started developing LED-UV in 2005 and launched its first commercial unit at drupa 2008. A strategic partnership with IST was concluded in June 2011.

ITL CTO Jason Smith outlined the difference between air- and water-cooled LED arrays: air-cooled systems have a lower capital cost and are easy to install, while water-cooled systems offer higher and more precise LED power output, are quieter and more compact. Last year ITL launched its Subzero air-cooled LED system and new is the SolidCure 2 water-cooled LED.

Smith listed the energy saving benefits of LED-UV: instant on/off (no shutters required); no warm up period; and addressable, individual LED array control. Smith said LED arrays demonstrate consistent output over their lifetime, displaying a predictable 15 percent drop over 10,000 hours. In addition there is no radiated heat (IR), no dangerous wavelength emission (no UVC/B and no ozone), and no mercury, making LED arrays fully RoHS compliant. In terms of LED technology trends, Smith said chip manufactures are developing systems with increased curing power at lower wavelengths.

For sheetfed applications ITL has a patented technology to turn the LED arrays off between sheets and along narrow sheet edges. LED arrays can be selectively switched on a scanning printer so only the active head receives curing power. On a web press, edge arrays can be turned off when running narrower webs. 'You can direct UV where and when you want it and in real time,' said Smith.



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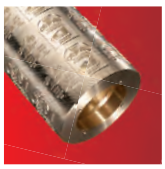

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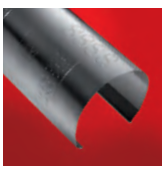

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Smith gave examples of ITL systems in the field: the Domino N610i inkjet printer uses Solidcure water-cooled LED pinning arrays with conventional UV as a final cure. The demonstration rig installed on IST's flexo press uses Solidcure 2 and Solidcure 2 HD water-cooled LEDs.

LED PIs are less reactive than conventional UV PIs, making it necessary to boost

Ink manufacturer perspective

Siegwerk's head of R&D Marc Larvor, gave an ink manufacturer's perspective on LED-UV.

Larvor said key drivers favoring LED technology include the rising cost of energy and growing awareness of issues related to environmental sustainability and safety – making the ozone-free status of LED and its greater lifetime key benefits.

But for ink manufacturers, there is a limited choice of photoinitiators (PIs) which cure on the very narrow bandwidth required for LED and at the same time meet key requirements for reactivity (cure speed and adhesion), yellowing resistance, odor, stability, processing/handling, balance between surface and through cure, and acceptable cost.

LED PIs are less reactive than conventional UV PIs, making it necessary to boost the concentration of functional acrylates to compensate.

'Clear' systems including white and varnish introduce additional constraints including yellowing and surface curing, said Larvor.

Where food packaging is involved, developing Low Migration inks and coatings presents a particular challenge. 'Proper curing is crucial to avoid migration of non-reacted acrylated monomers,' said Larvor. 'So it is not just a case of finding a low migration ink, but also the requirement to cure it properly.' Low migration photo-initiators are even more expensive and harder to find than standard LED PIs, said Larvor.

The favored LED-UV wavelength today is 385nm. One exception is 395nm, which seems optimum for UV flexo white – 'and we do not know why this is.' Future research is looking at the potential of shorter wavelengths: '20W at 365nm, for example, will be very interesting for us.'

Despite these challenges, Siegwerk has LED-UV ink solutions for flexo, screen and varnishes - though these are not selling in any volume at present. Low Migration versions of its LED flexo and varnishes are also available – 'but still speed and cost are things which are not settled.' A Low Migration Screen ink is a low priority for the company, said Larvor.

On the offset side of the business LED-UV inks are still under development. The key challenge here is getting the lamps close enough to the sheets to increase curing power to useful levels.

Larvor said IST's LED Prepared combination lamp will allow narrow web printers to trial LED on promising applications such as in-mold labels, shrink films and cold foil, where migration was less of an issue and the webs are sensitive to heat.

'You can't just compare the power of the LED and conventional lamps - you have to test the actual print, particularly for adhesion. We need to validate LED properly before making energy calculations - we must compare apples with apples'.

In conclusion, Larvor said LED-UV has a bright future, but there is still work to do. 'It is a brilliant idea – energy saving, increased safety and ease of use. But there are issues to be solved including curing whites and varnishes, final properties for packaging, cost of inks and coatings, and migration. We will have a higher chance of success working in partnership with press manufacturers, printers and LED lamp suppliers.'

Press perspective

A press supplier's perspective came from Peter Ploehn of Chromos, which is a distributor of conventional and digital narrow web presses from Codimag, Durst, Omet, SMAG and Spartanics.

Ploehn asked why LED-UV has not yet made a major impact in the print industry - despite its widespread adoption in other industries such as lighting.

He identified the key problems: the use by narrow web converters of combination printing processes; the huge number of different applications and substrate types; ink migration; the requirement for 100 percent curing; and increasingly strict laws and regulations.

'These restrictions are very critical for a breakthrough of a new technology like LED and it has to be proven 100% before a wide base of printer will use it.'

How do Chromos' printer customers view LED technology? 'Printers already have to take care about low migration legislation. Now LEDs come and add to the confusion. It is not so much about cost as being sure a product is compliant to given regulations on food packaging. Adhesion, migration – the printer must be 100 percent sure will not get problems in any of these areas.

'Another very big issue is that LED inks are not yet available for all applications, and the price of the inks is high.'

LED-UV testing rig at IST

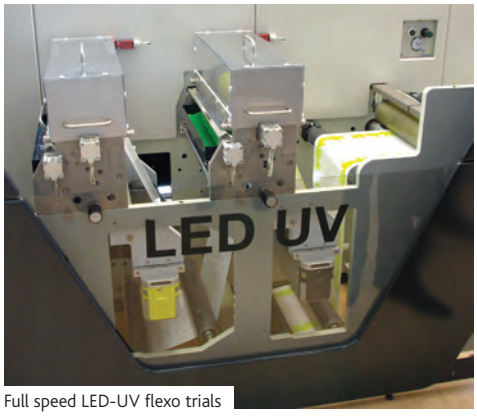
Ploehn defined the conditions for the wider acceptable of LED in the narrow web market as follows:

- A full range of printing inks and coatings are available from a wide range of suppliers
- All regulatory requirements in the label and packaging industry are met
- Investment breakeven (ROI) is reasonable for printers

'If these parameters are given, a printer may consider the LED technology as the next milestone in the industry and will start to invest in that technology.'

IST's LED Prepared lamps offer a good initial step, said Ploehn. 'It is now much easier to trial these systems in real life by just changing over one station to get real world feedback and not just R&D lab results.'

LED-UV could be a very interesting solution for flexible packaging as wide web converters seek alternatives to solvent gravure and water-based CI



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Artes MD Luca Airoldi with Omet XFlex X6 press

Artes crafts future strategy

Attention to customer service and a move to high definition flexographic printing have allowed Italian converter Artes SRL to thrive. ***Andy Thomas*** reports

Italian converter Artes SRL this year celebrates the 40th anniversary of its move into self-adhesive label production.

The company's history goes back before that, however. The grandfather of managing director Luca Airoldi founded the original company printing textile labels, then handed the business to Luca's father and uncle. Together with colleagues Bernasconi and Belloni, they formed a new company specifically to print adhesive labels, and moved into the company's present location in 1974. Luca's uncle today has the role of president The first presses installed by Artes were Iwasaki and Honda flatbed letterpress. A long association with Gallus started with a Q33 before Artes moved to rotary letterpress with an R160 in 1979.

In 1996 Artes made the bold move, with Nilpeter, into UV flexo – the first narrow web converter in Italy to do so. 'At the time for most printers it was letterpress or offset – early flexo was not for high quality work,' recalls Luca Airoldi. Artes soon added another two print heads to the 4-color press.

In 2002 Artes formed a partnership with Dutch press manufacturer MPS, installing one EP and three EC UV flexo machines. In 2011, a 430mm-wide10-color Omet XFlex X6, was commissioned. Another new press is planned, most likely another 10-color UV flexo machine.

Artes has always made its own analogue flexo and letterpress plates, but three years ago decided to invest in a digital platemaking system. An Esko CDI was chosen along with DuPont FAST thermal plate processing. The CDI is also used to image ablation-layer digital letterpress plates, which are washed out with water.

HD certified

Today Artes is one of only four Italian converters to be HD certified by Esko.

'HD plates have changed the quality of print but also taken away production problems connected with analogue plates,' says Airoldi. 'It has also made us fingerprint our presses, which is necessary for HD. Prepress work is made easier and the thermal plates have a longer life time than our analogue water-base flexo plates'.

Although Artes has considered digital presses, the letterpress machines handle short run work of 100-200 meters quite efficiently – and with the added quality of HD digital letterpress plates.

'There is no doubt the future is inkjet,' says Airoldi. 'But while customers want just-in-time delivery, the total quantity of labels we print is still growing, so we do not yet need digital.'

Artes has made a particular specialty of added-value multi-ply peel and seal labels, printing both on the adhesive side and on the liner, manufactured both in-line and off-line. 'There is a growing market for labels with different languages for our Italian customers which export their produce,' says Airoldi.

Sustainable sunlight

Artes recently invested in 2,500 sq meters of solar panels on the roof of its factory. Now an astonishing 50 percent of the factory's power requirements are met by energy from the sun. In addition the company gets paid for putting energy back into the national grid.

Other applications have included games and short run promotions.

End use markets

Artes services a wide range of market sectors with self-adhesive labels, including food and beverage, auto oils, chemical, household, cosmetics and some pharmaceutical work.

More of Artes' work is going to retailers' own (private label) brands, although indirectly through intermediaries rather than direct. Artes deals directly with one retailer, which positions its private label products at the premium end of the market.

Business is still growing but constrained by the difficulties faced by the Italian economy. 'At least there is a big difference between now and four years ago in the worst of the economic crisis,' says Airoldi.

The growing complexity of dealing with shorter runs and shorter delivery times has led Artes to install an MIS system which will gather production information from each production machine.

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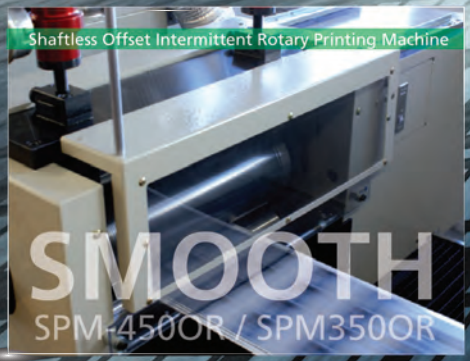

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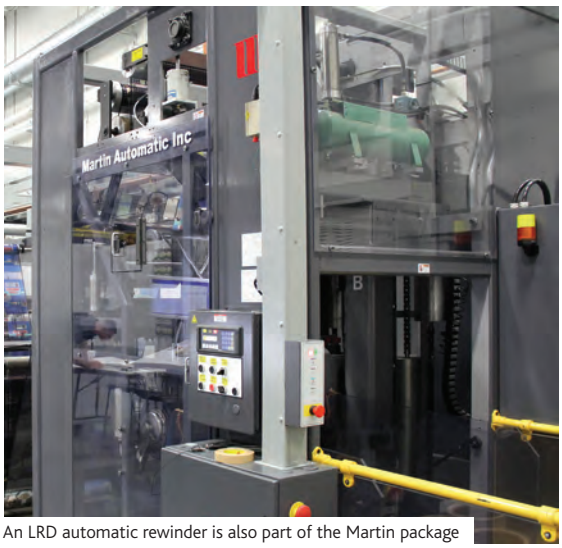
President of Precision Press Inc, Lee Timmerman, with the Martin ECPF lap splicing unit



An LRD automatic rewinder is also part of the Martin package

Precision culture

Precision Press is a strong advocate of offset package printing and has recently installed a Goss Vpak press with Martin automation. ***Nick Coombes*** reports

Precision Press, part of the Taylor Corporation, is a label, flexible packaging, and forms printing company with a well-earned reputation for quality. Precision's modern 213,000 sq ft facility houses over 40 presses, most of which are offset litho for label and flexible package printing.

'Offset print on lightweight film is a way for brand owners not only to reduce their costs, but to achieve life-like renderings of their products on the shelf,' says company president Lee Timmerman. 'Offset graphics has the ability to make products look appetizing and real as opposed to maybe the flexo print that is currently the standard on flexible film.'

Precision's latest investment is a Goss offset press with Martin automation equipment.'We originally put Martin components – ECPFI automatic lap splicer and LRD automatic rewind – on the front and back of our Muller Martini press six years ago and we were very impressed with their precision and reliability,' says Timmerman. 'A press is only as good as its weakest link and the Martin components have been hugely reliable. They allowed us to maintain tension on various film weights, which is critical in offset printing. So when we decided to add an even wider, 33.5in and faster 9-unit Sunday Vpak 500 Goss press, we wanted to open up our window of substrates even more. Controlled web tension is critical to maintain great print quality and when you desire to run many different substrates, a top notch unwind/rewind is needed. We purchased some upgrades on the Martins that reduced the friction component even more so we could run the very thin films down to 0.5 mil. The upgrades have been spot on and they've been a great investment.'

Looking ahead, Lee Timmerman sees a continued growth opportunity for web-offset printing on thin films. 'With offset you can do great imaging with four colors versus needing ten colors on a flexo press, and you don't have to charge customers for plates.'

Precision has invested heavily during the last eight years in the IML (Injection Mold Label) market. 'IML has been a very strong packaging element in Europe, and usually Europe is five to ten years ahead of the US in label printing,' says Timmerman. 'IML will continue to grow in the US. It's had a slow start but most of those problems have been automation issues. We have vast run sizes compared to Europe and to do that we need to have high-count cavity molds. The automation to drive that has been complicated, and the special labels used need to be very consistent. Robotics has improved and label precision is there so we're able to do it now.'

Timmerman predicts, 'As you go to the grocery store you'll begin to see a lot more of these rigid plastic containers with some really great print quality on them. You will also begin to see it more in shrink labeling and flexible packaging. When you get into offset-quality, blueberries will actually looks like real, fresh blueberries instead of blue blobs. Not only will the graphics improve, but you can now change shapes and have custom shaped containers that help identify brand.

'We've invested in barrier IML over the last three years and we now have some unique capabilities that allow us to create our own substrates. We can create barrier labels for injection mold containers that are very resistant to oxygen and to vapor transmission. Today we are really at the level of glass, and products that are currently packaged in heavy and breakable glass bottles can now be packaged in less expensive lightweight plastic containers. In addition, we're matching our labels composition to the containers so they're recyclable.

'There are a lot of good things happening today with barrier technology to preserve the contents. We're also able to do retort because of the properties of our unique substrates and we're achieving high-pressure pasteurization, which is perhaps where things are headed in the future for sterilization.

'The advent of robotics in our finishing allows us to group orders on our presses. And with robotics, we have a lot better assurance to the client that we're not mixing labels, which is a big deal in food labeling. When the robotics can automatically pick up an entire sequence of labels and put them in separate trays, you don't get the mixing that can happen in a lot of other systems today.

The Skinnypack was a Gold Winner for Innovation in this year's IMDA Awards - it was jointly developed by IPL and Precision Press

IML innovation brings new life to sheet-fed labels

In a world exclusive, ***Nick Coombes*** visits Germany and the USA to find out what lies behind a reported resurgence in high value sheet-fed labels – in-mold in particular

To many in the industry, label converting means roll to roll production on a narrow web press, and this has become the accepted norm for much of the self-adhesive market. But, there still exists a large volume of label work that is produced on sheet fed offset presses, and according Heidelberg, the sector is growing rapidly.

According to press manufacturer Heidelberg, labels now represent some 20 percent of the package printing sector, in a market estimated to exceed 50 billion square meters of substrate a year.

Significantly, the annual growth rate for sheet fed labels, which hovered around the 12 percent mark between 2006 and 2010, is projected to see a 65 percent increase by 2016. According to Heidelberg's Harald Weimer: 'The shift from web-fed flexo to sheetfed offset highlights how the technology meets manufacturers' requirements for quality, productivity, flexibility, and sustainability.'

'The shift from web-fed flexo to sheet-fed offset highlights how the technology meets manufacturers' requirements for quality, productivity, flexibility, and sustainability'

The case for sheet-fed

For long the province of wet glue labels for the glass bottle and can markets, sheet fed offset is making major inroads into new high tech labels, especially in-mold. Currently accounting for little more than two percent of all labels, this sector has huge growth potential, and Heidelberg has demonstrated one of its Speedmaster XL 106 presses running 57- and 60-micron Treofan film at speeds of 10,000 sheets/hour. The press was a 6-color perfector, fitted with a coating unit and Heidelberg's CutStar sheeter, and the labels were printed with

Left: One of Inland's latest nine-color Speedmaster XL 106 presses, fitted with coating units

Above: Both Speedmasters are fitted with CutStar sheeters to convert substrate supplied on the roll

UV inks and a water-based lacquer. They were dried interdeck with UV lamps and a quadruple length DryStar UV Combination system was fitted at delivery.

Felix Müller, Heidelberg's head of sheet fed product management commented: 'This perfector, which prints in-mold labels on both sides, is a world first, and gives users the opportunity to print promotions or consumer protection information on the reverse side of an in-mold label.' Key to the success of the Speedmaster XL 106-D is the rotary die cutting, which is superior to flat bed for the thin film sheets, and Heidelberg has installed several of the 'D' Speedmasters worldwide since 2008. With shorter make-ready times than a flatbed unit, and production speeds up to 10,000 sheets/hour, users are seeing a saving of around 35 percent on their die cutting costs. According to one customer, the added flexibility of a rotary cutter keeps prices very competitive.

Sheet-fed in action

In addition to the Speedmaster XL 106, Heidelberg says its Speedmaster CX 102 and Speedmaster XL 75 series are well suited to in-mold production, whether using conventional inks and coatings, full UV, or a combination of the two.

To find out more, and see how the market is adapting to the latest incarnation of sheet fed production, this writer visited Inland Label, a third generation family business based in La Crosse on the banks of the Mississippi river in Wisconsin. Founded in 1903, and purchased in 1944 by the grandfather of current CEO Mark Glendenning, the company, which began life as a commercial printer, moved into label production in the 1970s.

Today, the company employs over 300 people and in addition to its six Heidelberg offset presses has flexo and gravure capability too. With customers to serve around the world, the company has taken key strategic steps that see it work with print partner Darley Labels in the UK, a technical partner in China, and has set up its own sales and technical team to focus on Latin America. From a base in cut & stack labels, which still account for much of its work, Inland has moved into self-adhesive labels, shrink sleeves, in-mold and blow-mold labels for markets as diverse as beer and beverages, food and household products, wine and spirits and own brands.

Speaking for Inland, VP Operations Guy Billing explains: 'As the demand for commercial print declines, more and more offset printers are looking at the package printing market, but it's no easy switchover. The print technology might be familiar but understanding the substrates, and most importantly knowing how they will behave downstream, is a steeper learning curve.' Inland bases its success on establishing and maintaining close working partnerships with its suppliers and customers. 'We set out to be a manufacturer that our customers trust to solve packaging problems they didn't even know existed – we're not just a package print converter,' says CEO Mark Glendenning.

Switching allegiance to Heidelberg presses some 30 years ago, Inland is full of praise for the way in which the German manufacturer has listened closely to the specification required, and delivered a bespoke press that meets all criteria. 'This wasn't always the case with press manufacturers, even Heidelberg, comments Billing, 'but technology has moved on in leaps and bounds to keep pace with the changes in market demand to the point where each converter needs a press configuration that addresses a specific market requirement. And Heidelberg has responded to whatever we've asked for.'

A coordinated approach

The latest presses to be installed at the La Crosse facility, in 2013, were two 9-color Speedmaster XL 106 machines, fitted with coating units, and capable of handling sheeted film down to 50-micron. 'We find this sheet size offers the best layout and batch flexibility, and the gripper control provides the consistency that we need for sustained and repeatable print quality,' says Billing, who added that Heidelberg's Prinect pre-press suite was key to providing more predictability, and less of a requirement for on-press adjustment than would be the case with a flexo press.

Keeping the plant up to speed in terms of technology is crucial, according to CEO Glendenning:

Inland Label was recently voted 'Supplier of the Year' by MillerCoors – a great accolade for the company and its people

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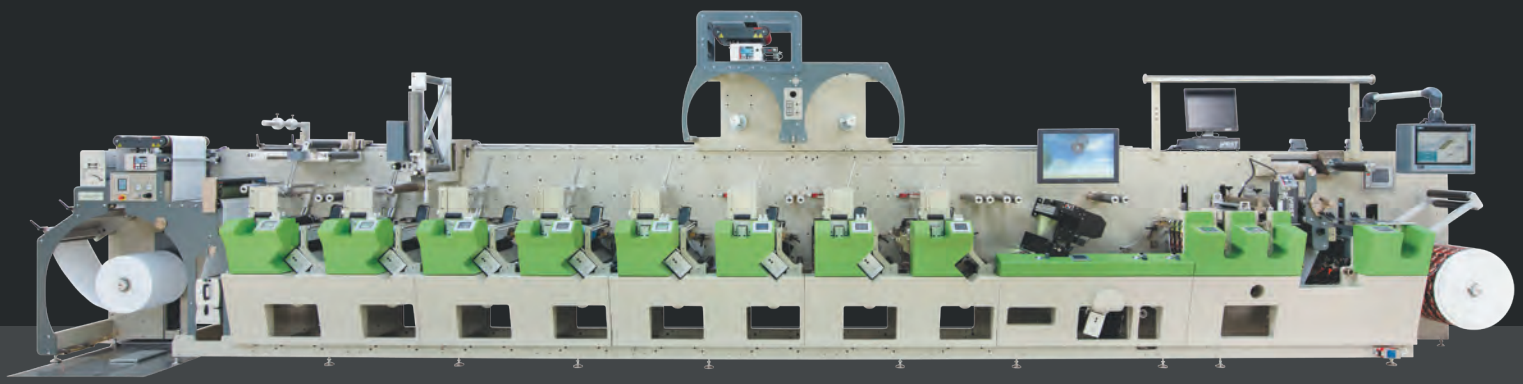

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'Labels make some of the biggest demand of any printed packaging,' he says, 'because they have to work on our customers' lines, and carry on working for consumers under some of the harshest conditions, from extremes of heat and cold to high humidity, intensely abrasive conditions, and even immersion in water and chemicals. Nothing works harder than a label!'

The proof of Inland's success is in the 26 billion labels produced each year for a portfolio of brand leaders that continues to grow. Standardization has been a mantra at Inland for some time, with the aim of being able to reproduce a printing proof in commercial production. 'It's all about consistency,' says Billing 'from pre-press through printing, to substrates, inks and coatings, and on to finishing – and this includes quality staff training at all levels.'

Explaining that the Heidelberg press is not supplied with an instruction manual on how to handle 50-micron film commercially, Billing says that Inland has established its own matrix for enhancing crew skills. This also falls in line with the company's plan for growth. 'The tipping point is 100m USD in revenue, beyond which it's impossible to carry on as a small size family business,' says Glendenning. 'It requires a very different approach to investing in people and technology. You have to be very careful not to lose the values that made you successful in the first place – personal relationships, partnerships, and caring about our people. It's a painful barrier to pass through, but an essential one.'

For a company that has consistently doubled in size every 10 years, and is now seeing an acceleration, one might say it's invest or die!

Control assures quality

A visit to the company's offset plant in La Crosse bears witness to the efficiency with which the operation is run. The giant 165,000 sq/ft plant houses four Heidelberg Speedmaster XL 106 presses and two of the Speedmaster XL 106-D models ('D' for die cutting). All four printing presses are multi-color with coating units and extended delivery, and each converts the substrate from a roll with a CutStar sheeter. They are all connected by Heidelberg's own closed-loop Prinect management system, which draws praise from Inland for the way in which the manufacturer continually updates the software. 'We see software as the way forward now – the mechanical development of press technology has probably gone as far as it needs to go – the rest is down to improved control,' says Glendenning.

While the plant is G7 certified for color matching, Inland holds itself to much tighter color standards. As Glendenning quips: 'In packaging, customers just wouldn't accept the standard of G7 – they expect us to be much better than that.' Inspection, color and register systems fitted on presses are just a part of Inland's extensive QC process. Another element in the company's quality control is waste management. Since 2010, Inland has maintained a 'zero to landfill' status, which was given impetus by the global recession, and is now seen as an integral part of manufacturing.

With the capacity to produce more than 26 billion labels a year, Inland uses both its offset and gravure presses, the latter located in another 100,000 sq/ft facility at company headquarters a short distance away. Label types produced at the two plants include cut and stack cold glue, cut and stack hot melt, injection mold, pressure sensitive, roll fed, as well as blow mold.

But, it was the precision requirements of the in-mold labels that prompted Inland to work closely with Heidelberg for both printing and die cutting requirements. The light weight of the substrate involved, and its propensity to 'float' when moved at high speed prompted Heidelberg to look at three key areas to allow the press print with accuracy. These were the grippers, the delivery – which is fitted with a dynamic brake – and the fitment of a light gauge package on the infeed that assists material transport through to the grippers, without jamming.

According to Guy Billing: 'Even with this additional technology, it has taken us a considerable amount of time and experimentation to figure out the correct settings to run these materials. This also entails having a standardized process that is strictly adhered to, so that if a problem occurs, we can identify whether or not a press component is to blame. It is also imperative that you identify the components that require a regular PM, and at what interval, because these are components that are not listed in the standard Heidelberg PM list.'

Inland also looked for a better die cutting solution than a traditional platen. 'We needed to maintain a tight die cut tolerance to meet the demands of downstream labeling, and the Heidelberg Speedmaster XL 106-D proved to be the perfect solution,' says Glendenning. Based on the latest XL 106 technology, the rotary die cutter looks like a 2-color press. In fact, the first unit handles embossing and the second unit the die cutting. Quick to make ready and capable of handling 740 x 1060mm sheets at speeds up to 10,000/hour, it offers a faster solution as well as a more accurate one on foils as thin as 0.03mm. It has two suction segment disks to transfer the sheets from

the impression cylinder to the sheet guide plates, which are fitted with Venturi nozzles, and is fitted with a dynamic sheet brake.

The way forward

Inland Label highlights how lateral thinking can be used to embrace the challenges of today's label market. It has taken a printing process that is traditionally seen as a production method for large volumes of wet glue paper labels and turned it into a sophisticated method of handling difficult materials with great precision. It is an excellent example of creative thinking and close cooperation between converter and technology manufacturer, and acts as a pointer for the package printing of tomorrow.

Four label motifs with critical color shades – usually produced in four individual jobs with special colors– were realized by means of a multi-color system in a single pass with one set of printing plates

Flexo matches digital

Zeller+Gmelin has developed a 7-color ink system which matches the 7-color digital toner color space. ***Klemens Erhlitzer*** reports

Labelexpo Europe 2013 in Brussels saw a group of companies from the flexo printing industry present a license-free multi-color system designed specifically for narrow-web printing. The following four project partners teamed up to demonstrate the MP-color system: anilox roller manufacturer Apex Europe; repro company Athena Graphics in Roeselare, Belgium; press manufacturer MPS Systems; and ink manufacturer Zeller+Gmelin

Prior to last year's Labelexpo, the partners jointly developed the fictitious product 'Fruit Berry'. The coloring of the four labels was specially designed to require the use of special colors. Using the newly created seven-color MP-system, the labels with the four different designs were printed in UV-flexo in one pass with just one set of printing plates. The printed samples on Fasson material (AM932 Global MDO White; Liner: S7000 PET23) were presented during the exhibition, and vividly demonstrated that with this system those critical color shades could be achieved without the use of special colors.

Compatible with digital toners

Due to its compatibility with digital printing, the 7-color MP-system offers the user another important advantage. This was achieved by an adaptation of the MP-system to the toner inks found in toner-based digital printing system.

For this purpose, Zeller+Gmelin has developed a special ink series based on the Uvaflex series whose individual colors have been exactly adjusted to the process colors (CMYK) and the additional colors orange, green and violet found in digital toner printing.

The inks use as a basis Zeller+Gmelin's established mono-pigmented mixing system. They are also available in a low-migration version.

With the new 7-color MP-system, printers can instantly switch between digital printing and UV-flexo or UV-offset printing for longer print runs, and thus take advantage of these conventional printing processes with respect to profitability and color stability with increasing volumes of orders. A prerequisite is a certain standardization of process parameters.

The result is that printers benefit from significantly lower downtimes. Individual Pantone colors can now be mixed at the repro stage, eliminating the use of special colors and the associated labor for changing colors and anilox rollers during printing. In addition to significantly saving time, the consumption of cleaning chemicals and the amount of ink residuals is reduced.

Coordinated production parameters

In addition to the UV-flexo inks, other parameters in the process chain have to be standardized in order to guarantee an accurate color reproduction in day-to-day production.

This is why at the launch of the system, Zeller +Gmelin worked with project partners from the fields of pre-press and repro, mechanical engineering and anilox rollers. The repro company Athena contributed the design of the labels and the color separation. Production was carried out on an MPS EF 410 flexo press at a printing speed of 120 m/min.

For the MP-system to be fully effective, press models are recommended which feature a high level of automation and very good registration accuracy, promoted by precision servo drives. The quartet is completed by anilox rollers, which need to ensure an accurate and consistent ink transfer rate. Anilox rollers from Apex were used for the printed samples. In the case of the four process colors anilox rollers with a screen of 405 l/cm and a pick-up volume between 3.5 and 4.5 cm3/m2 were used; for the additional colors (OGP) 265 l/cm and 5.0 cm3/m2.

Conclusion

The 7-color MP-system developed by these four partners offers possibilities to extend the feasible color space in narrow-web printing. Of particular interest here is the adaptation of the system to digital printing, which has captured a growing share in this market segment in recent years.

In the foreseeable future, many label printers will use in parallel both digital printing systems and traditional procedures such as flexo and offset printing in order to be able to take advantage of their respective strengths for different print runs and applications.

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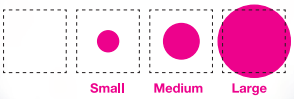

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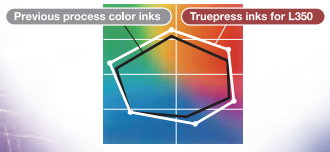

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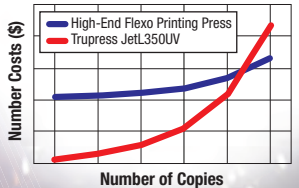

*The European Digital Press Association (EDP) voted the Truepress Jet L350UV "Best Label Printing Solution" of the year in the 2014 EDP Awards

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A prototype of Prati's new Saturn Omnia multi-finishing system

SmartCut automatic slitting knife positioning

Prati demonstrates finishing automation

Process control was the key theme of Prati's Open House, where a new slit knife auto mation system was launched. ***Andy Thomas*** reports

At an Open House held at its Faenza, Italy, manufacturing headquarters, Prati demonstrated a prototype of the new Saturn Omnia multi-finishing system and introduced its FastCut automatic slit knife positioning technology.

The three-day event focused on automation in all its practical aspects: from control of printed reels and finishing to maximizing productivity by reducing the chances of human error and standardizing quality control.

The FastCut automatic knife positioning unit was shown mounted on a Saturn Bidi inspection rewinder.'FastCut answers the calls from the market for automating tasks and avoiding downtime during cutting,' explained sales director Chiara Prati. 'With this technology we see a high positioning accuracy, tighter slit width tolerances, and reduced rejects and scrap generation. We see also a reduction in dust and improved knife life.'

There are also benefits to worker safety, as the system is fully enclosed, with no potentially hazardous manual knife handling. 'There are productivity advantages too,' says Chiara Prati. 'Greatly reduced operator knife setting errors and consistent slitting results from operator to operator.'

The FastCut module is now available for all new Prati products.
A pre-production model of the forthcoming Saturn Omnia line was demonstrated. This will be a versatile 'all-in-one' finishing system capable of handling multiple label substrates including self-adhesive paper labels and clear-on-clear labels, IML, and films and tube laminates from 30-350 microns. It will be available in reel-to-reel, reel-to-sheet and reel-to-stack configurations. The modular Saturn Omnia will be highly automated with a short web path and intuitive HMI control.

Several other machines were shown from Prati's existing range. Two Alhena finishing machines were shown processing both in-mold labels (Alhena IML) and wet glue labels, both with a stacker delivery. Key features include passive and active static elimination and what Prati calls a 'multi-shape collecting system', which allows a non-stop working cycle thanks to a continuous, automatically interchangeable vibrating tray.

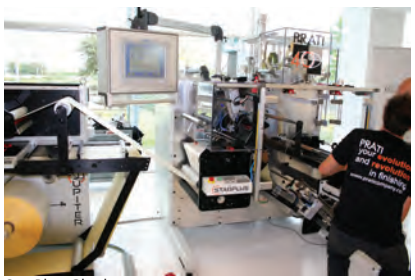
Also on show was the Starplus glue-less rewinder, designed for high productivity applications such as blank labels. Prati demonstrated three-minute job changes and said changeover times for complex jobs can now be lowered from an average of 60 minutes to 15 minutes.

'The fact of not having to fit and glue at the end of the reel has proved essential in providing labels for supermarkets, as thermal printing material is cleaner and does not create print head balance problems,' explained Chiara Prati. StarPlus was demonstrated combined with a Jupiter finishing system.

A VegaPlus Booklet machine was shown. A patented lamination station eliminates curling and allows sandwich coupons to be produced. Flexo printing, die-cutting and a second rewinder shaft can be implemented depending upon the type and complexity of the label.

A Saturn Bidi finishing system was demonstrated with a Pharmcheck inspection module. The camera employs a signaling system which displaying the precise point where the defect was found. The Bidi incorporates large diameter idler reels for accurate web control.

Ahena processing in-mold labels



StarPlus Glueless turret

The Open House finished with a networking evening at the fascinating International Museum of Ceramics.

Utah-based Traco Manufacturing has selected Nuova Gidue's advanced Master M5 flexographic press, writes ***Danielle Jerschefske***

Digital first, 'digital flexo' next

Traco Manufacturing has evolved its printing business in exactly the opposite way to most labels and printed packaging providers in the US and around the world – investing first in digital print technology, and then flexography.

The business launched 30 years ago near Salt Lake City, Utah, producing its Super Sealer Shrink Wrapper, a machine with an 'I-bar' arm and a heat-gun for sealing shrink wrap material such as PVC bags and tubing. Eventually Traco customers needed a supply of film for the shrink sealers, so Traco moved to support its clients' needs, importing various polyolefin and PVC materials from China and Taiwan.

By the mid-1980s tamper evident packaging grew in importance and product manufacturers began demanding printed branding on their clear neckband films. Therefore Traco started sourcing rotogravure printed materials from Asia, which made sense for high volume orders, and kept costs down when compared to sourcing such high volume print in the US.

Utah is a hub for essential oil, neutraceutical and nutritional supplement manufacturing. Multi-level Marketing (MLM) is often the business model used to launch and rapidly expand brands from a local favorite to national status.

By 2008, Traco felt the burden of short run orders, with local

Left:
Gidue M5 press at Traco Manufacturing in Utah

Above:
The M5 printheads at Traco

clients expanding the number of SKUs within their product lines and introducing new products more frequently. The solution for this predicament was the purchase of an HP Indigo ws4500 and supporting finishing equipment. It was most efficient to produce incoming work using a digital print solution and allowed for faster turnaround times.

"The automation technology is what's so impressive with this press. The changeover is extremely quick"

Explains Gary Whitehead, print production specialist at Traco: 'So we had solutions for both the large volume work and the short run orders, but then there was this mid-range area. For a while we outsourced the printing, but to provide the customer service and quality that we're known for, we decided it was time to become the captain of our own ship.'

It was two and a half years ago when Traco management first entertained the idea of bringing flexographic printing in-house. Whitehead continues, 'We definitely knew that we needed an inline press to match both gravure and digital quality with repeatability. And, we didn't want to go with a narrow web press.' Enter Nuova Gidue.

Automated Flexography

Traco selected and installed a new 26in Nuova Gidue M5 flexographic printing press in July of 2014, just the second of its kind sold into the US market. The M5 is a fully servo driven press promoted as the ultimate in flexo digitization. The plate cylinder and impression cylinder are independently driven in each print head. Every print station has a high definition camera to read printed register marks and automatically position the press into register and impression with the support of proprietary Gidue software. The HD camera looks at the marks and reads if the print dots are too big or too small, or if they are not registered. Servo driven adjustments are then made to the registration and impression on-the-fly.

Mat Jones, president of Nuova Gidue US, explains, 'By the time the first print mark gets to the end of the press, the first two print stations are more than likely in register. The impression change is done immediately upon the camera seeing the marks.'

Says Whitehead, 'The automation technology is what's so impressive with this press. The changeover is extremely quick. Even with the advanced automation integrated into some of the large CI flexo presses today, you can't run medium to short runs effectively because of the cost of setup and make-ready.'

Traco's M5 press has nine color stations. The final station has an ink pump and double UV Ray UV lampheads to cure through thick layers of white ink laid down on the backside of the reverse printed shrink sleeves.

The press will be dedicated to producing shrink sleeve labels. Tim Ferons, sales and marketing director at Traco explains, 'Our best and biggest customers so far are narrow web flexo printers that need access to a wider press width. Many of our PS label producing customers are finding that their clients are interested in making a transition to sleeves, and they do not want to take on the investment to produce the sleeves themselves.'

Whitehead adds, 'Narrow web flexo printers are experiencing an increase in demand for big shrink sleeves to decorate large containers of protein powders, fertilizers and more. They're looking for a partner to produce these sleeves for them, and we're equipped to support their needs.'

Both blade and shear slitting can be done on the end of the press or finished rolls can be sent to an off-line slitter. The M5 is also configured to run PS labels with a large die unit offering both semi-rotary and full rotary cutting with Gidue's unique Snowball matrix removal system.

The large impression cylinder doubles as a chill roll on each station to give flexibility in material selection and to ensure that heat-sensitive material remains cool through the printing process. The press is capable of running standard PS options, down to half mil films and carton board up to 14 points. A second, independently fed 27in chill drum sits below the impression cylinder to support IR curing of PS work, a

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Gidue M5 operators Chris and Keith (L&R) with Craig Whithead (middle)

distinctive option designed by XericWeb specifically for this press.

Traco will continue to outsource Kodak Flexcel NX printing plates as it gains more experience in flexographic printing in-house. For the time being, it's producing 4-color process work using Actega UV flexo inks. Says Whitehead, 'In testing, Actega's ink systems delivered the best results, and their support has been phenomenal.'

Automation through to finishing

AVT's Printflow roll report system is integrated into both the press and the off-line Webcontrol slitter rewinder. The 100 percent inspection system uses a digital camera to snap an image of every linear foot of material. It then creates an electronic roll map of the defects based on the parameters it's been set to flag in comparison to the defined master image. If anything moves out of tolerance, the system will alert the operator about what is occurring. This allows the operator to immediately respond to the issue on-press.

Once printing is complete, the electronic map of the roll is sent to the off-line slitter using AVT's Workflow Connection. This enables the machine to automatically start and stop where the defects are. There, the operator removes any defective material from a roll and splices the salable work together.

Ferons says, 'This means we're not manufacturing defect product in downstream finishing and production. The sooner we can get the flawed work off the roll, the faster the job is completed and sent out the door. It improves our lead-time, quality and margins.'

Operation feedback

Traco hired two experienced flexo press operators to run one shift per day. Keith worked at Multi-Color's York, Pennsylvania facility. Chris operated flexo presses at Label Express, which was acquired by Ft. Dearborn. By late September/October, the team produced quality, live work.

Says Chris, 'The screening on the press is superb and the plates are outstanding. We're doing 175 line screen with a 0.4 percent dot, and could easily do 200. By using UV flexo inks, the pressroom is cleaner than when I used water-based inks in the past. With the plates and press automation, we are producing outstanding quality, and the press is quiet with the solid steel frame.'

Digital printing

The converter upgraded to the HP Indigo WS6600 with an in-line priming unit as soon as it was available. Prior to that materials were primed and coated on an AB Graphic Digicon Series II finishing system, which made workflow and scheduling complicated. The Series II machine has one flexo station, a corona treater, overlam, a die unit and slitter.

When it comes to run lengths, Traco continues to see blurred lines. Whitehead explains, 'We're still figuring out exactly where the sweet spot is for the Gidue press to give us flexibility in scheduling and to free up capacity.' The M5 has produced orders between 250-500,000 linear feet at up to 500 ft/min. At the same time, many digital jobs are increasing in volumes as brands develop and brand managers acquire a preference for the look of digital.'

The converter is finding great opportunity in producing PS labels for the rapidly proliferating e-cigarette market on the HP Indigo. The seemingly unlimited number of flavors demands the technology.

Michelman's water-based DigiGuard varnish is used on all digital shrink labels to improve the slip for seaming and application. 'And it makes the inks more durable, ' Whitehead adds.

A range of Karlville seaming, inspection and cutting equipment is used to convert the printed sleeves. The majority of the sleeves are converted into cut bands for hand application while some orders are large enough to be ordered in rolls and applied automatically. Whitehead says, 'Karlville provides a robust product, at a good price with great support.'

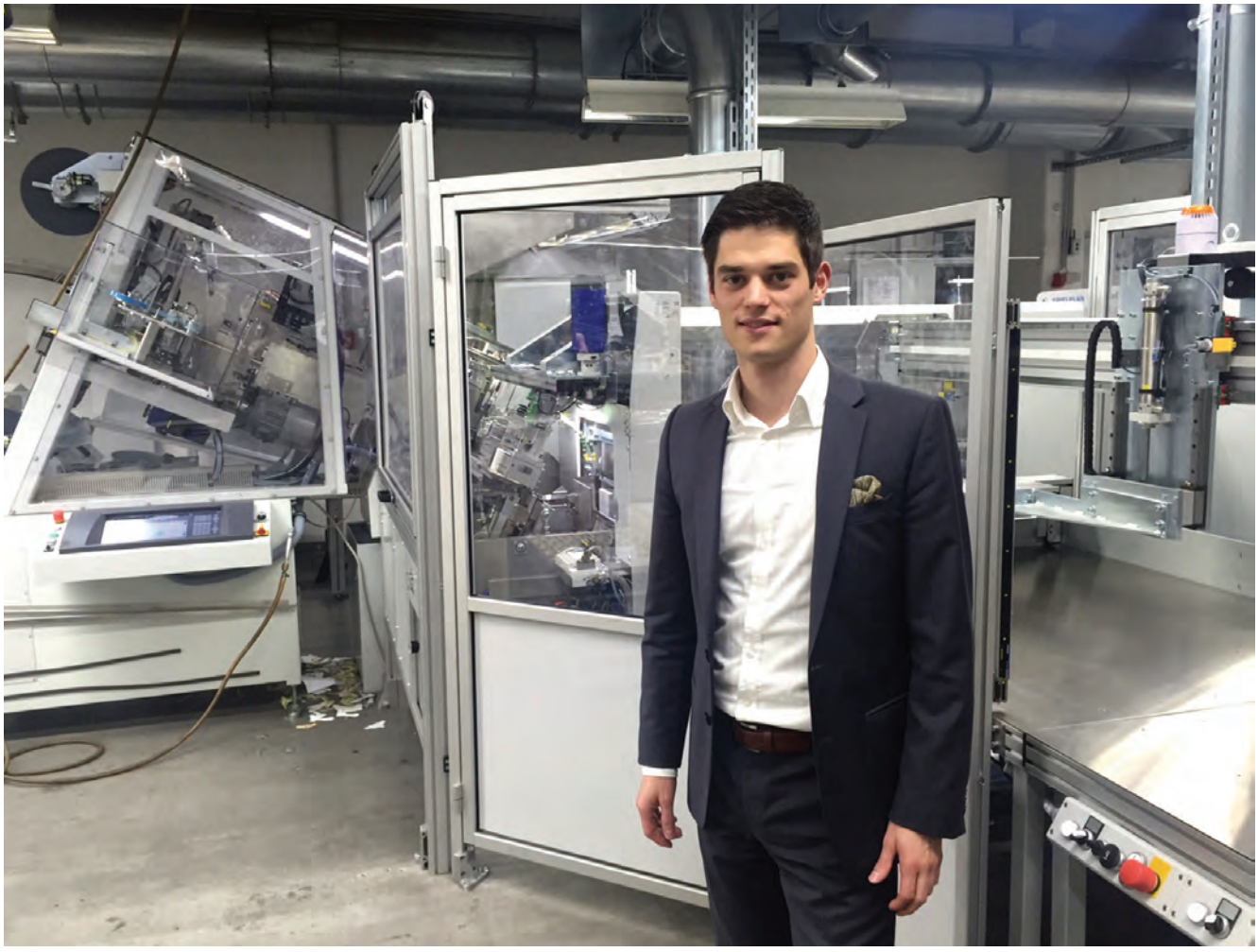
Growth Strategy

Traco has a National Accounts Division (NAD) with five sales people and more than 1200 distributors that sell its neck bands and clear polyolefin films outside of Utah. Locally, its Utah Packaging Division (UPD) promotes a broader line of packaging goods.

Ferons is restructuring the salesmen into teams to provide more depth in support for customers. He says, 'We have to make sure we have the right people servicing accounts. With the new press, selling has become more complex.'

Explains Ferons, 'We're finding that as we develop our new offering, end users are interested. We have to train our sales team to be able to communicate our abilities effectively to the market.'

Traco will undergo a marketing refresh over the coming months to educate end user prospects on its new capabilities and how it may affect their packaging selections for both new product launches and reorders. With the new Nuova Gidue machinery, Traco can satisfy a client's quality needs regardless of run length. The Italy-based press manufacturer has partnered with established and respected flexographic printing support systems distributor APR, based in Illinois, to provide service and spare parts supply in North America. Read more about this arrangement on labelsandlabeling.com.



Walcher-Rees' Fabian-Walz with the company's automated Polar finishing equipment

Increasing sheet-fed label efficiency

German label converter Walcher & Rees has invested heavily in partnership with Polar-Mohr to increase the efficiency of its finishing operations. ***Jürgen Rönsch*** reports

Walcher & Rees is a 200-strong, family-run company, based in the Baden-Württemberg town of Heidenheim, where it produces nearly 16 billion labels a year. The business was taken over in 2010 by games manufacturer Ludo Fact and today generates sales of about 30 million EUR.

To meet growing demand from its German customers, the company has invested in Polar's DC-11plus label system, with initial reports from the management board indicating a significant improvement in performance.

Visiting the office of managing director Fabian Walz, it quickly becomes apparent that Walcher & Rees is not just about labels; also on display in the bright and friendly room are the products for which its parent company is well known, namely board games, jigsaw puzzles and playing cards.

And the Heidenheim company, whose production is based on five Heidelberg XL printing presses for offset sizes 75 x 105 and/or 75 x 106 as well as seven Polar cutting machines, gives due consideration to the world of games in its own profile. 'The core business of Ludo Fact,' Fabian Walz explains, 'is the production of jigsaw puzzles and board games for publishing houses which do not have their own production facilities.'

The business manager goes on to explain that when Walcher & Rees was still independent, it was one of Ludo Fact's major suppliers, principally providing the covers required for the games. Describing the strategy, he says: 'When the economic situation in Heidenheim became more difficult in 2010, we decided to take over the

"We quickly found that printing was very well set up but that there was a lot of room for optimization in the area of finishing"

PolarDC-11plus

"Up to nine million labels can be produced in one shift, whereas previously only six million was possible under the same conditions"

business, incorporate it into the Ludo Fact group and restructure the company.'

The background to this was also that Walcher & Rees had always been known for its high quality and there was a great deal of potential - particularly in the drinks industry. Today, games make up 20 to 25 percent of turnover while 75 percent comes from the food and drink sector. Core products in this regard are security deposit labels, wraparound labels and square-cut and die-cut labels. In line with the company's desire for sustainability, all labels are made out of paper and no lamination is used.

Optimization

As part of the takeover in 2010, a thorough overhaul and reorganization of the existing machine base and processes at Walcher & Rees was carried out. Walz: 'We quickly found that printing was very well set up but that there was a lot of room for optimization in the area of finishing.'

In this regard, attention focused on the five die-cutters which had seen better days and in the management's view no longer conformed to the level of performance which is both possible and necessary to achieve in today's market. The results of the analysis confirmed this assumption. The idea was that by deploying new units equipped with the latest technology the overall number of machines could be reduced whilst significantly increasing productivity. This was particularly important, because the drinks industry, which largely requires die-cut, wet-glue labels, is subject to continual pressure to achieve greater efficiency and lower prices.

Close Cooperation

At the same time Walcher & Rees was looking to upgrade its finishing systems, Polar-Mohr was also looking to bring a new system to market. The company had demonstrated the prototype for a new die-cutting system at drupa 2012 and was looking for a partner with the facilities for installing and testing the machine under production conditions.

The experience gained and suggestions for improvements were channeled directly into the product, allowing the performance of the DC-11plus to be optimized. Walcher & Rees then awarded the contract to Polar.

Walz: 'Although this was the first time that we had gone for Polar in the area of die-cutting, we felt certain that we were doing the right thing.' The machine was installed at Heidenheim in Spring 2014 and, from then on, comprehensively tested in production at a rate of three shifts per day. The experience gained as well as the suggestions for changes and improvements were collected and documented, as discussed, and communicated to Polar's development engineers. Walz: 'Today, we can say that the major changes made since last year to the initial design have turned the DC-11plus label system into a completely different machine. As far as results are concerned, however, they are absolutely in line with expectations.' The level of satisfaction is also clear from the fact that

"We are now able to process hundreds of the most varied formats accurately and reliably with very rapid retooling"

in addition to the DC-11plus now in operation in Heidenheim, a second system has already been ordered.

Positive effects

The users at Heidenheim identify a number of advantages in the new Polar hardware. Top of the list are effective workflow and the increase in both final speed and processing volumes, as compared with earlier machines. In concrete terms, production is arranged so that the labeling material is first cut into strips with a Polar high-speed cutter. The strips are then cut on the Autocut 25 into individual label packs which are then transported to the DC-11plus system die-cutter. After die-cutting, the label packs are automatically carried onto the BDplus single-head bander and banded together. Thanks to the revised processes, the DC-11plus today handles up to 24 packs per minute whereas its predecessor's peak was 16 packs per minute. As regards production at Walcher & Rees, this means that, depending on the order, up to nine million labels can be produced in one shift, whereas previously only six million was possible under the same conditions. A particular advantage in this regard is the machine's ability to cut two label stacks at once. Walz: 'We currently use the machine particularly for print runs in the tens of millions and we are extremely happy with it.'

Flexibility

What managers also appreciate is the flexibility of the machine when it comes to formats and their uses. 'We are now able to process hundreds of the most varied formats accurately and reliably with very rapid retooling,' says Walz. The large table, which by contrast with the earlier models is significantly easier to load and can hold a pre-buffer of up to three layers, is a contributing factor, as is the fact that, compared with the earlier models, there is greater scope for adjustment, for example as regards tilting, rotating and distortion handling. Walz: 'And, in this regard, we shouldn't forget the stability and construction of the machine itself. Once the production parameters have been set, the cut product is transferred smoothly and steadily into the die-cutting room to be further processed. You could almost let the machine run on its own.'

Rotatek team with new India agent Provin Technos

Amit Ahuja at Multitec stand during Labelexpo India

Good business reported at Labelexpo India

Aakriti Agarwal summarises Labelexpo India concluded on November 1 in Delhi.

Body text: 7,927 visitors attended the seventh edition of Labelexpo India which took place from October 29 to November 1 at Pragati Maidan in New Delhi. With just under 200 exhibitors taking part, the show floor was busy with product launches and news of many installations being agreed as numerous deals were signed on-site.

Amongst the dignitaries who inaugurated Labelexpo India 2014 were Vivek Kapoor, president, LMAI; Ajay Agarwal, vice-president, LMAI North; Rajguru, vice-president, LMAI South; Vijay Mohan, vice-president, AIFMP; Douglas Emslie, group managing director, Tarsus Group; Lisa Milburn, managing director, Tarsus Labels Group; and Andy Thomas, global managing editor, Labels & Labeling.

Emslie said, 'We are very happy to be back in India. I'd like to thank our partners LMAI and AIFMP for all their support. I am very pleased to see a very strong domestic Indian presence at the show together with growing representation from Asia.' Milburn added, 'We are delighted to be back in this vibrant and growing market.'

Product launch highlights included HP Indigo's WS6800 digital press, Nilpeter's Indian-made FB3300S press with gravure unit, Omet's XFlex X4 8-color all-servo press and Rotatek's Smartflex UV flexo press. Although they were not showing presses, Nuova Gidue manned a sizeable stand at the show, and both MPS and Mark Andy were represented on the stand of their Indian agents. Xeikon meanwhile demonstrated its entry-level 3030 press.

Multitec sold eight presses at Labelexpo India 2014. The company displayed three presses on the show floor – Ecoflex, Ecoflex VSi Servo and Ecosmart – all of which had been sold before the show. These have been shipped to printers in Mumbai and Dubai. Amit Ahuja, director, Multitec, said, 'The new launches, Ecoflex VSi Servo and Ecosmart, got a great response at the show. We sold two Ecoflex VSi Servo and three each of Ecosmart and Eoflex in these four days.'

Diehard Dies, the only India rotary die manufacturer for the flexo industry, launched hard chrome plating dies; TechNova launched its SmartJet LP112 digital inkjet label press; GEW introduced its Rhino UV energy supply to the Indian market, and announced the start of serial production for the global market; Malhotra Graphics, Indian agent to Xeikon Prepress ThermoFlexX Solutions business unit commercially launched the ThermoFlexx 80 to the Indian market; Morsef Machines commercially launched Delongbo label printing machines in India; Hyden Packaging, a manufacturer of dry offset presses diversified its product portfolio with the launch of U 350 slitter rewinder inspection system; and Webtech Engineering demonstrated a new version of FlexoMaster, an 8-color all UV press, at Labelexpo India 2014.

Monotech Systems launched its Jetsci VSRI digital converting system for complete track and trace and anti-counterfeiting applications, which has been manufactured in-house by the company. T P Jain, Monotech Systems director, said: 'We have installed 15-plus of inkjet VDP monochrome machine up to now. We are looking at installing at least five more in the current fiscal.' The company sold two Jetsci VSRI digital converting system during the show.

"Multitec sold eight presses at Labelexpo India 2014. The company displayed three presses on the show floor"

U V Graphic Technologies launched its all-new LED UV curing systems, offered for flexo, offset, gravure and letterpress. Abhay Datta, director, U V Graphic Technologies, said, 'This technology launched in India is entering European and American markets. It will catch up in India soon. We are looking for ink suppliers to support the product.' The company sold six plate mounters, four core cutters, three offline hot foil stamping machines and seven slitters with web inspection systems in four days off the show floor.

Global Graphics had a good show with its principals. Weigang sold its traditional stack flexo machine; and Grafotronics sold its prinitng and converting machine to Great Eastern Impex. Global Graphics sold more presses and equipment which shall be announced soon.

Jandu Engineering sold four machines including a coating machine, a high-speed rotary label die-cutting machine, a slitting machine, and a die-cutting and sheeting machine; Vinsak reported sales of two LSR 330 label inspection slitter rewinder, Flexo Image Graphics sold five Rotoflex VSI 330 slitter rewinder machines with 100 percent fault detection systems; AVT sold four Helios PharmaPrint inspection systems; Alliance Printech sold its Ace 1 label slitter rewinder to Holostik India; Arrow Digital, distributor of Epson Surepress In India,

Gravure unit on locally built Nilpeter FB3300

Ajay RaoBane, HP Indigo sales manager India & Sri Lanka and Christian Menegon with HP Indigo WS6800 press

sold an SurePress L-4033AW to J P Printers in Mumbai, R K Label Printing Machinery sold a 6-color UV flexo press to Shree Ganesh Prints; leading Indian label converter Zircon installed the Omet XFlex X4 press displayed on the Weldon stand at Labelexpo India 2014 as soon as the show finished.

Luc Dehandschutter, Arets Graphics, 'Arets Graphics and Toyo Ink India, both subsidiaries of Toyo Ink Group, introduced a new series of UV flexo inks at Labelexpo India 2014. With the launch, Arets hopes to improve its share of UV flexo ink market in India.'

Jitesh Mehta, director marketing, South Asia and Sub Saharan Africa, Avery Dennison, said, 'Labelexpo India has been very successful for Avery Dennison. A large number of customers visited our booth and were keen to know about our offerings in durable, home and personal care and pharma segments. The 14 innovations showcased earned the spotlight at the show. Labelexpo gives us a platform to demonstrate to customers how we can help them grow.'

Martin Kugler, GEW, said, 'For GEW the show was an international platform to announce the availability of the Rhino electronic power supply for UV-printing systems that was launched in production following three years of intensive development and rigorous testing.'

Ashish Anand, LinkSmart Technologies, 'Labelexpo India was a successful event for introducing smartDNA based new technology and solution for tamper-evidence, anti-counterfeit coupled with track & trace. We have at least three licensing opportunities in multiple geographies. There were more opportunities at Labelexpo than we had expected.'

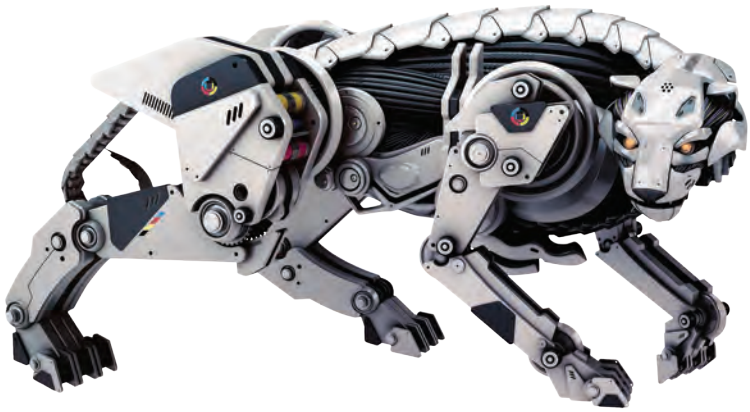
Ajay Mehta, managing director, SMI Coated Products, said, 'The four days at the show were very busy and extremely fruitful. Over the period of years the show has progressively improved and the quality of the large number of visitors is truly amazing.'

Pravin Varshney, country manager, UPM Raflatac, said, 'We enjoyed the four extremely busy days at Labelexpo India. It is definitely is the best place to meet the people working in the labeling industry and to see where the business is moving. We are seeing overall healthy organic growth in India and across South Asia due to a rapid increase in pre-packaged food products, pharma sector growth and the massive appetite for personal care products. In addition, Indian companies are increasingly becoming aware of environmental issues.'

A Appadurai, country manager, Indigo and inkjet solution, HP India sales, said, 'Labelexpo India was the ideal platform to showcase the new HP Indigo WS6800 digital press for the first time in India. One of the major attractions at our booth was the digital supermarket, where visitors could see first-hand, the various application possibilities for label and packaging converters. Our key highlight was the Brand Innovation Summit, where we were able to share insights with brand managers and owners, helping them understand the challenges and opportunities of the label industry. We were thoroughly pleased with the visitor engagement we had at the expo.'

Omet sales area manager Paolo Grasso with Sanjeev Sondhi of Zircon Technologies at the Weldon Celloplast stand

L-r: Andy Thomas, editor L&L; Deepak Manchanda, associate director of business development at Firstouch Solutions; Hitesh Shenoy, head technical packaging, ISC, China and AP, GlaxoSmithKline Consumer Healthcare; Biswajit Basu, head of packaging development, Reckitt Benckiser, health and personal care; and Christian Menegon of HP Indigo



Suzhou Jan Tan Packaging and Printing has installed a new Screen CTP platemaking system to produce digital letterpress, flexo and PS offset plates. ***Kevin Liu*** reports on a benchmark company in the industrial transition of China's label converting industry

The new factory of Jiangtan

Leading China's converting transition

Suzhou Jan Tan Packaging and Printing ('Jan Tan') is a flagship company in the Chinese label printing field. It was established in 1992 and has grown to become one of the largest professional label makers in East China, and indeed in the whole country. Its printing plant is located in Wujiang, Jiangsu province, which is very close to Shanghai.

In recent years, Jan Tan has grown so rapidly that it installed one new flexo press on average each year. It purchased successively one Gallus 8-color printing press, one Gidue 11-color E-Combat press, one Nuovo Gidue 12-color M5 flexo press and one Nuova Gidue Combat 10-color M1-370 UV flexo press.

This year, Jan Tan installed another two new flexo presses: one Nuova Gidue M5 flexo and one Omet XFlex X4 flexo press, so it now has a total of six flexo presses.

In addition, Jan Tan has several Taiyo full rotary satellite printing machines, as well as Lintec intermittent label presses and a Zhongtian intermittent offset press.

Jan Tan enjoys a high market share in household chemical, food and beverage, pharmaceutical and electronic label sectors, and its customers include Unilever, Pfizer, Mondelez Food (formerly Kraft), Total, Bacardi, Kao, Shanghai Jahwa, Pechoin, Wahaha, Nongfu Spring, Guyuelongshan, Jin liquor and Uni-President, all leading enterprises in their respective sectors.

Investing in CTP

Along with the consistent upgrading of its press hardware, Jan Tan has also increased investment in prepress systems. Its latest investment is a multi-functional Screen PlateRite FX870II CTP unit. The FX870II is used to output digital relief printing plates, flexographic plates and also PS offset plates. Plate dimensions are from 100x100mm to 870x762mm with a maximum resolution of 4800dpi.

'The Screen FX870II is able to meet our various platemaking demands for different printing modes including letterpress, flexo and offset,' says Kevin Huang, deputy general manager of Jan Tan, explaining why the company purchased this machine.

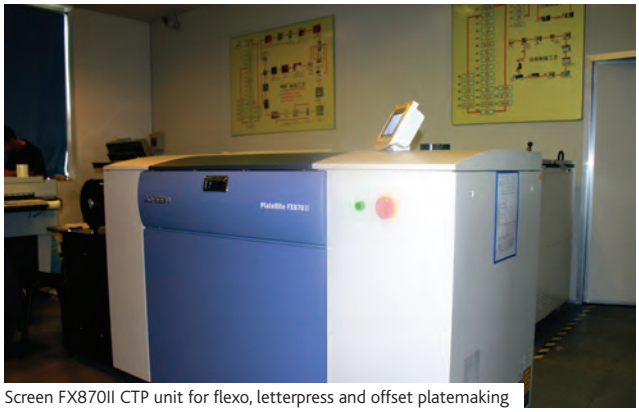
Huang explains that before the installation of the FX870II CTP platemaking system, Jan Tan made its letterpress and offset plates in the traditional way using film exposure systems, while flexo plates were contracted to outside plate makers.

'We have a variety of printing machines, so we used this machine first to make relief plates and PS offset plates, and after a period gaining experience, we gradually started to make flexo plates. We can now solve all kinds of platemaking problems by using only one machine, and it also enhances our control over label printing quality,' says Huang.

'This system can form halftone dots as small as 0.5 percent, therefore the dot quality and printing resolution in the highlight area of the printing plate has become better. In a word, it is very efficient at improving the overall quality of labels.'

Color management and digital proofing

At the same time as purchasing the Screen CTP platemaking machine, Jan Tan also purchased a Solutions Graphiques aqueous/solvent plate processor and supporting



Screen FX870II CTP unit for flexo, letterpress and offset platemaking

Solutions Graphics plate processor

"This September, Jan Tan passed its FSC forest management certification, demonstrating that Jan Tan is a green and sustainably developing enterprise"

solvent washout unit, as well as digital proofing and color management software via Screen's partner, Flexolutions.

'Making plates traditionally through film exposure, the relief letterpress system could expose only 10 percent to 90 percent dots, that is why the printing quality is poor,' says Joseph Kong from Flexolutions. 'The Screen FX870II ensures the stability of dot reproduction, and consistency of highlight and shadow area reproduction, which ultimately produces a high level printing effect.'

The Screen FX870II is equipped with StudioRIP HD2 Flexo high definition flexo screening software provided by Flexolutions. 'Vignettes can be transitioned to zero and the solid areas gain enhanced ink density,' says Kong. 'In this way, both flexo and letterpress print with a high definition effect. Another benefit to using CTP platemaking equipment is we can control the compensation curve of the machinery, which is more convenient for an enterprise to do color management.'

Jan Tan has entrusted Flexolutions to provide color management services and detailed training for its operators. At the same time, Jan Tan purchased a unified digital proofing system for self-adhesive labels.

'Actually, there are very few applications of digital proofing in the Chinese label printing industry,' continues Kong. 'We noticed that most of the printing plants in South China are still using traditional proofing, which includes platemaking, make-ready, printing trials – many steps which can take up at least 10 percent of the total running time of the printing press. This is a kind of double waste of both time and money.'

Adds Kong, 'In my view, the press should be used to produce products other than just proofs. When converters implement digital proofing we make sure it works. In this way, there will be more and more customers accepting digital proofing, because the output of digital proofing is almost completely the same as that of the printing press after color management and adjustment.'

Flexolutions is a Hong Kong company that provides a full set of prepress media solutions, including editing software, 3D design and collaboration software, digital proofing systems, high definition digital imager and inline Flexo plate processor (solvent or thermal), and inline letterpress plate processor. After purchasing the entire production workflow, Jan Tan will enjoy the corresponding service and support facilities provided by Flexolutions.

Automation retrofit

Jan Tan is one of the fastest growing companies in the Chinese label printing industry. Besides improving the productivity of its printing presses, the company has updated its technology and retrofitted equipment to reduce production losses caused by operator error.

'We use Martin Automatic's automated splicing apparatus in each rotary printing machine, which has reduced waste while enhancing production efficiency,' says Kevin Huang. 'In addition, we have implemented automatic inspection on our machines by installing several sets of AVT on-line quality check systems and strengthened our real-time monitoring of product quality. We also equipped several Eurotech slitter-rewinders with off-line quality check systems and multi-functional post-processing systems. All this automation helps us to not only improve our product quality but also enhance productivity and reduce unnecessary waste.'

As well as upgrading and retrofitting its machinery, Jan Tan has invested heavily in its employees' professional competence. Says Huang: 'At present, there are almost 20 employees in our company with a bachelor degree. In our process and quality management department, most of them have a bachelor degree. We also arrange periodical training for all our employees, teaching new knowledge and skills, so they can better meet the practical requirements of our fast growth.'

In Kevin Huang's view, if the enterprise is to develop, both hardware and employee quality are equally important and should be promoted together.

Comprehensive upgrading

The new Jan Tan factory is located in the Wujiang Economic and Technological Development Zone. With a floor space of 6.6 acres, it has become one of the most efficient label printing plants in China. Besides ISO9001 and UL certificates, Jan Tan was officially granted the BRC/IOP Food Technical Standard certificate in August, which marks the start of a professional service for customers in food industry. At L&L China we are expecting to see more development in the food package and food security fields.

This September, Jan Tan passed its FSC authentication, which means its products will be granted forest management certification, demonstrating that Jan Tan is a green and sustainably developing enterprise. This is also regarded as a contribution by Jan Tan 'to the protection of forests for all humankind.'

At the same time, the Chinese government has recognized Jan Tan's efforts in technical innovation. In July, the company was formally named as a 'Jiangsu Provincial high-tech enterprise' by the State Science and Technology Commission (SSTC). This means that the leading position of Jan Tan in label technology has been affirmed by official authority.

Recently, 'retrofit' and 'upgrading' have become hot topics for the Chinese media, reflected in the efforts of Jan Tan to lead the domestic label printing industry into a new era of high-tech, high efficiency and high quality.

Screen PlateRite FX870II key points:

- *Multi-functional CTP for letterpress, flexo and offset plate making*
- *Plate dimensions from 100x100mm to 870x762mm*
- *Maximum imaging resolution 4,800dpi*
- *StudioRIP HD2 flexo screening software*

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Software evolution

Sispro, the planning and production control system from Argentina-based UpSoftware, used by some of the biggest label converters in Latin America, has brought significant benefits to Etiflex of Mexico. ***James Quirk*** reports

As label converters seek to improve the efficiency of their businesses and optimize production, they increasingly turn to software management tools. In Latin America, Argentina-based UpSoftware, founded in 2006, has benefitted from a growing focus in the region on process automation, now counting more than 80 clients in Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Paraguay, Peru and Uruguay. It also has customers in Spain. It has set up a regional network of distributors: in Chile, Costa Rica and two in Mexico, with a deal in Colombia most recently put into place.

In its native Argentina, among UpSoftware's client list is a who's-who of leading local converters, including Artes Gráficas Modernas, Adhepel (now owned by CTI Invest), Achernar (part of Sato Group), Autopack (recently acquired by Baumgarten of Brazil), Multilabel, Artes Gráficas Raal, Talleres Gráficos Corti, Maroni C and Villamagna Hermanos Etiquetas. Its biggest client outside Argentina is Etiflex, one of Mexico's leading converters, with more than 20 machines hooked up to Sispro, UpSoftware's planning and production control system.

"We are a company that believes in data. What you can't measure, you can't control"

'Etiflex installed the system in late 2008, beginning with four connected machines and some control terminals in the offices,' recalls Gonzalo Tagliabue, director of UpSoftware. 'It was an important sale for us; we only had four or five clients outside Argentina at the time because we had only recently begun to sell outside the country. By 2009, they had all their presses connected to the system and terminals distributed throughout the factory, so it was also a big contract for us in terms of getting everything right in such a big plant.'

Today, Etiflex has all its presses – flexo and digital – and finishing equipment connected to Sispro, using the system to constantly evaluate its production. The company, with 34 years' experience in the market and sales offices spread throughout Mexico, specializes in variable information and promotional labeling. It serves a broad range of industries, including food and beverage, textile, automotive, personal care, pharmaceutical and cosmetics, as well as producing tickets for events and transport.

'We are a company that believes in data,' says Etiflex's operations director Ari Vonderwalde. 'What you can't measure, you can't control, so we were looking for production control software that would enable us to plan and grow more efficiently. A great advantage of Sispro is that it is a very open and flexible system. It can be tweaked and adapted. It can be used in many different industries, although it has certainly evolved into a product which is ideal for the label industry. We have been able to develop the system and adapt it for our needs. Our suggestions have had an influence in the system's evolution.'

At Etiflex, Sispro is integrated into the company's ERP system. As an order is received, it is planned automatically and with little intervention, according to Vonderwalde. Sispro communicates with the presses and monitor's the job's progress: set-up time, stops, material and ink consumption. The finishing process is similarly monitored.

'We have made many changes to our processes as a result of analyzing the data produced by Sispro. Internally, we now talk in indicators – that's the system's influence,' says Vonderwalde. 'Previously, we were losing too much time during set-up, and the system allowed us to pre-set many parameters which speeded up our processes. It allows us to see the data in real time and take immediate decisions. The presses run at maximum capacity and with less waste, thanks to the system's analysis. Since using Sispro, we have improved production efficiency by 10-12 percent each year. It helps to make us more competitive.'

UpSoftware's Gonzalo Tagliabue reports that client input has been a key factor in Sispro's development. 'We release new updates every six months, and we frequently incorporate suggestions from our customers. They are the ones who really know what they need. So the system is constantly evolving.' One development currently underway is the integration of warehouse and stock data into Sispro, while next year will see the launch of MyDash, a dashboard-styled webpage which gathers key indicators so they can be viewed live via tablets or computers.

'The most important module is the Sispro Terminal, which accumulates the data from the machines. It provides statistics for everything: maintenance, consumables, waste, down-time, set-up. At a production level, it is very complete. It's much more economic than other systems and our clients tell us it is very user-friendly. We focus on the terminal more than anything: that's what controls the production. This differentiates us from the major international MIS suppliers. The Sispro system essentially works for any type of industry, but we focus particularly on the label and flexible packaging markets. And as a result of this focus, the system has evolved to meet the label industry's specific needs.'

UpSoftware's Sispro system in use at Argentina-based label converter Autopack

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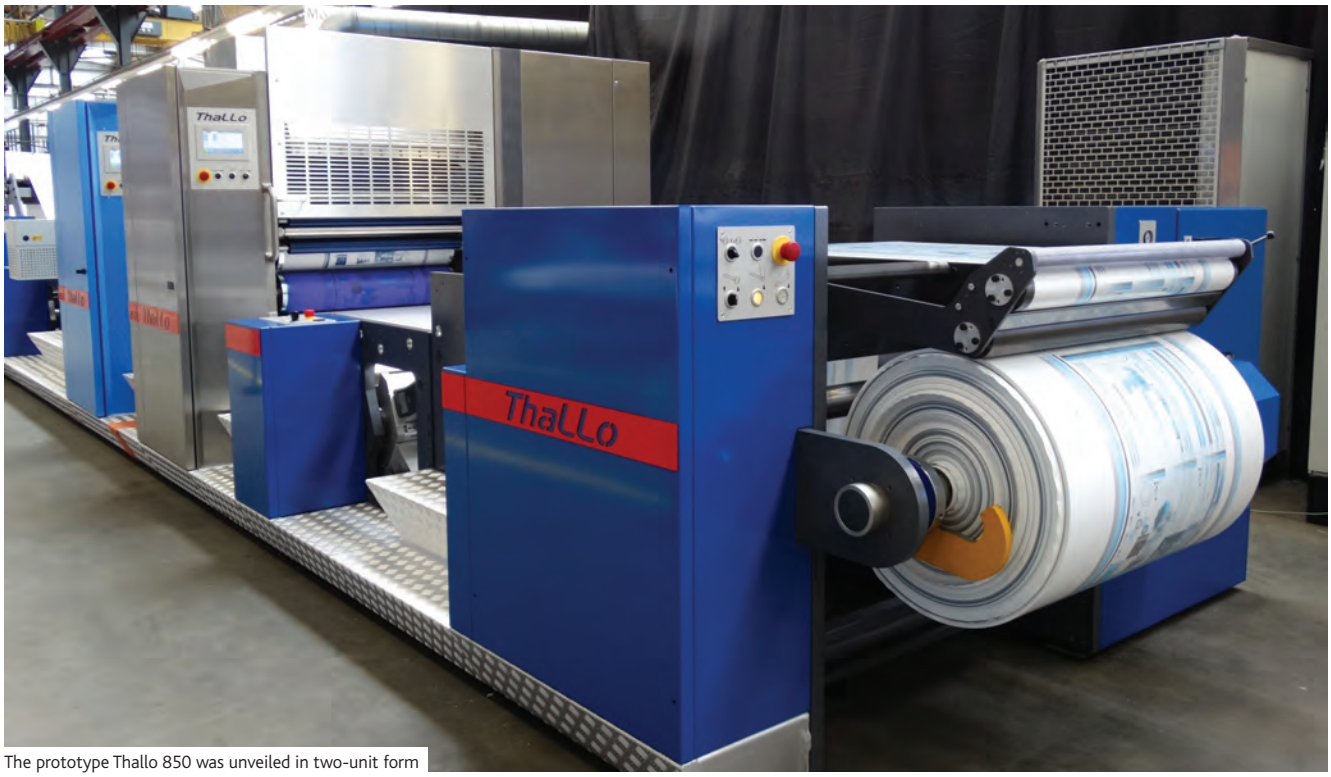

The prototype Thallo 850 was unveiled in two-unit form

Thallo prototype unveiled

DG press has unveiled the prototype of its new Thallo web offset press. ***Nick Coombes*** reports from The Netherlands

'Thallo, which means "Goddess of Youth", is our answer to all the questions posed by all of what we call Generation 1 variable size web offset press technology, and will enable package printers to benefit from a process that has now be honed for high productivity in the flexible packaging market,' says Kloppers, who as one of the key players in the development and launch of the 2nd Generation variable size web offset press Thallo , probably knows more about the technology and market usage than anyone apart from his fellow co-owner Remko Koolbergen.

DG press HoldinG (DGpH) was resurrected from the remains of the original company by Kloppers, Koolbergen, and a small team in 2009. In five short years, the company has grown to 60 people, with 30 more due to join in 2015 when Thallo series production begins. And, in the meantime, the company has purchased and refurbished the former Drent factory in Eerbeek. This vast 15,000 sqm site now acts as world headquarters for a fast-growing business that has 450 active customers using Drent Vision and Gazelle presses, as well as the original VSOP presses, which are now manufactured by Müller Martini. For all of these, DG press ServiceS can add value and prolong commercial life.

According to Kloppers, the owners of more than 90 percent of these presses in use worldwide are now 'on the company's books'. The Holding company has four divisions: DG press ServiceS for service and parts; DG press MachineS for new and used press sales; DG press LogisticS for purchases and assembly; and EMB Technology, which is powder coating application machinery. Turnover is predicted to top eight million EUR in 2014, a far cry from its humble beginnings in 2009.

Addressing the audience of around 35 converting companies at the preview event, Kloppers explained the reasons behind the development of Thallo offset technology. He pointed out that offset has cheaper plate costs than flexo and gravure; can use both UV and food-safe EB curing; and can print on a diverse range of substrates with the highest quality. He went on to define the changes in market demand that play into the hands of offset. 'Ink migration is a hot topic, especially in the rapidly growing food industry, and with run lengths shortening and customers requiring JIT delivery, offset has the fast response times to meet deadlines. It's also sustainable and adaptable to meet the demands of new substrates, especially flexible ones.'

Available in three web widths, 1050mm, 850mm, and 520mm, Thallo was designed from the largest size downwards to ensure machine integrity. Each is capable of printing at 400m/min on substrates from 12 to 200-microns, and all have stepless repeat. DG press believes the Thallo 850 is likely to be the best seller amongst flexible packaging converters, but has also promised that a carton version, capable of handling 200 to 700-micron board, will be developed at a later stage.

With all new in-house designs for web tension control, unwind/rewind, cooling and drive cylinders, guide rollers, ink trays and ink train, and closed loop control, DG press says that customers can tailor their own presses with OEM arrangements for register, web video, curing systems, and splicing. Believing that specialisation brings the best results, DGpH has cooperated closely with Uteco Converting to understand the flexo and gravure print processes better, and design a flexo unit for integration into the Thallo line. Seen as a strong financial partner with global sales coverage, Uteco is the ideal complementary partner for success of the fledgling Thallo project.

Timescale for the project is going according to plan. Two production site machines are sold and in the process of being constructed – a five color and a seven color.

As LL went to press Müller Martini announced it will no longer manufacture the VSOP press.

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Dies and tooling

Andy Thomas rounds up the latest technology developments in rotary and flatbed tooling

Film-less flexible die breakthrough

Anderson Europe has launched a 'Direct to Plate' system that looks set to revolutionize the manufacture of flexible dies, eliminating the cost and variables of film-based die production.

The DieJet 1212 uses a plotter to print the contours of the flexible die directly onto the surface of a prepared steel sheet using a UV-curable ink.

Conventionally, flexible dies are prepared using a UV light resistant laminate. But this has many potential drawbacks, including high capital investment costs, the need for highly skilled operators, and high levels of energy use and waste - only about five percent of the film laminate can be used, according to Anderson's figures. In terms of installation, these systems require a minimum production area of around 200 sqm and a UV light-safe photo lab room.

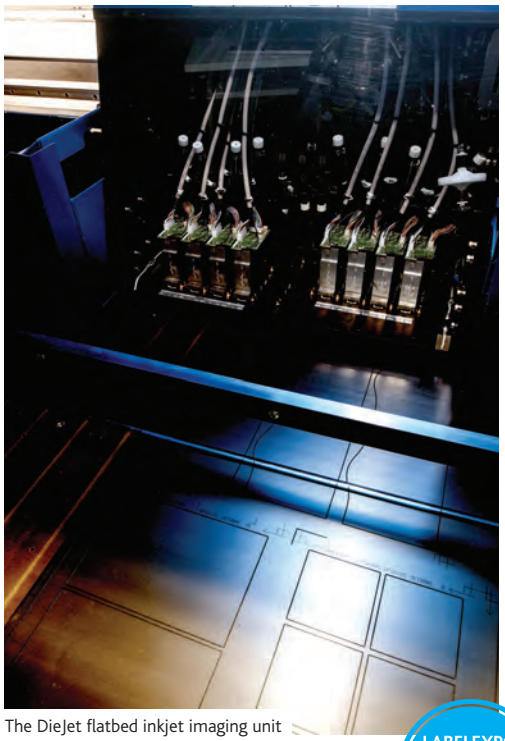
The DieJet 1212 by contrast can be placed anywhere, has a compact footprint of 15 sqm, an energy usage one sixth that of conventional systems and no requirement for specially qualified operators.

'The DieJet 1212 is an industrial-scale large-format flatbed inkjet printer which delivers a distortion-free, high productivity workflow, even on large workpieces,' says Alfred Könemann, who is responsible for sales and development of the products made by Anderson Group subsidiary Anderson Europe in Detmold, Germany.

"Könemann says production time is just 20 minutes for the preparation of a steel plate for the etching process"

Könemann says production time is just 20 minutes for the preparation of a steel plate for the etching process compared to at least 50 minutes conventionally. 'We also see a lower consumption of material per cutting plate and lower investment costs – including no special preparation of the production area.'

Anderson Europe DieJet removes film from die preparation process



The DieJet flatbed inkjet imaging unit

LABELEXPO AMERICAS 2014

DMS

DMS has launched its fifth generation FV-Series hot stamping equipment which features interchangeable shafts to run a variety of tooling systems. The standard two-inch shaft allows the use of DMS standard hard tooling.

New is the Ring Die System, which features lightweight CNC-engraved bronze sleeve dies that mount on a mandrel in minutes. The ring dies are significantly less expensive than solid brass dies, less expensive to ship, and easier to install and store than heavy solid brass dies.

Ring dies mount onto a precision aluminum mandrel and snap into position across the web using a locating strip specific to the job.

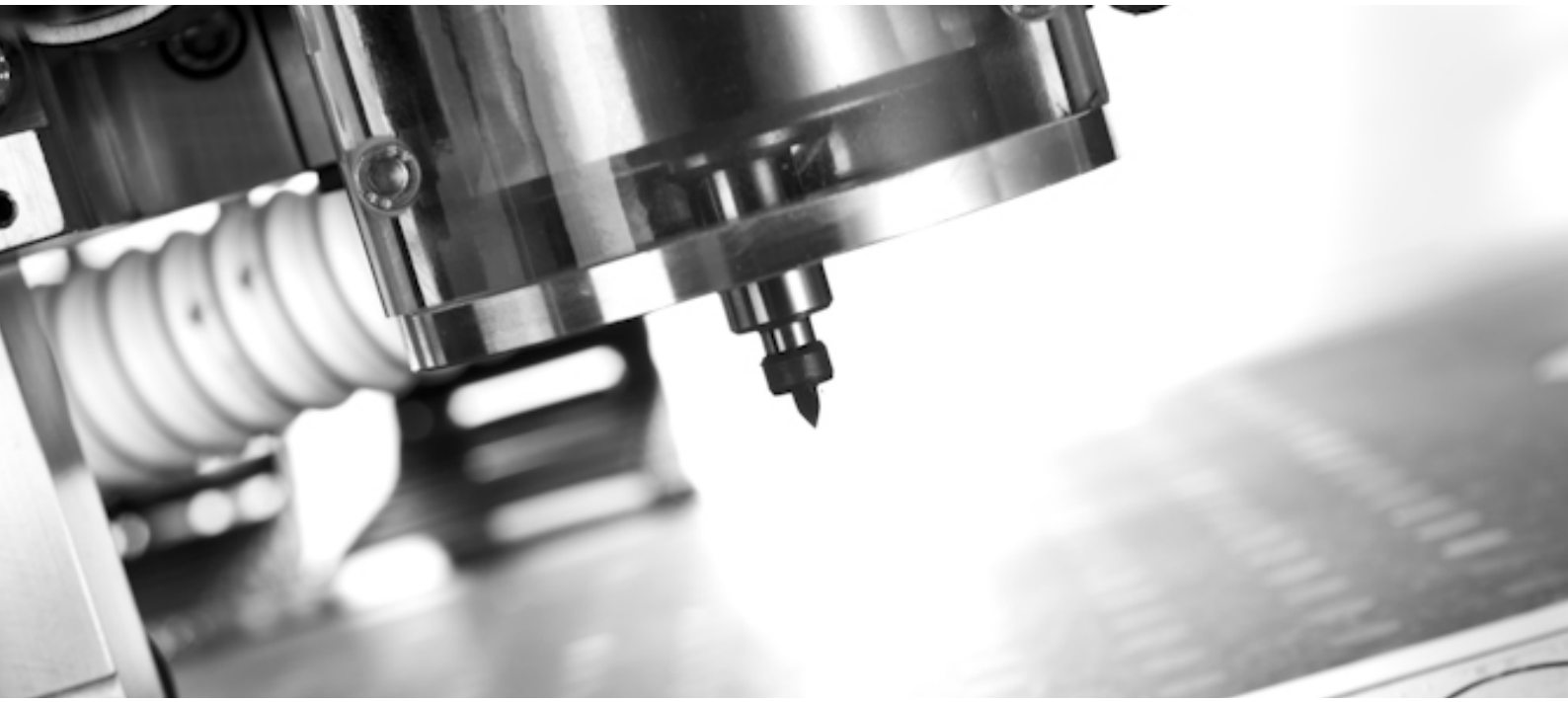
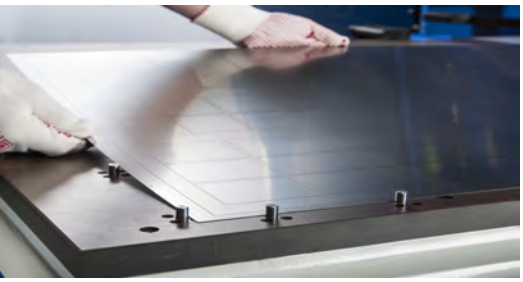
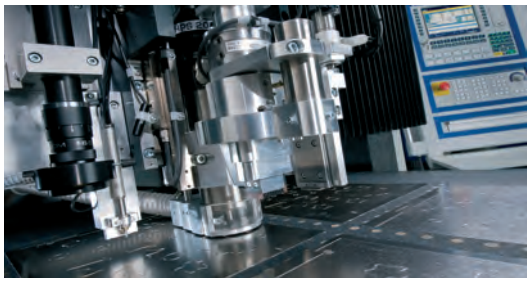
Kocher + Beck

At Labelexpo Americas, Kocher + Beck launched its UR Precision M automatic matrix transfer rewinding system, allowing non-stop winding of self-adhesive waste matrix. The system 'further enhances our ability to automate a press,' said Jim Ward, vice-president of operations and engineering.

When the maximum roll diameter has been reached, a bump and cut mechanism automatically transfers the leading edge to the new core. The full roll is then rotated around to the exit position, and pneumatically pushed into a safety stop position to allow for an ergonomic lift off by the operator. The compact independent unit can be either free standing or press mounted.

PRECISION PRODUCTION TECHNOLOGY MEETS HIGH QUALITY **FLEXIBLE DIES**




GVM engraving machines, for CNC sharpened flexible dies features the rotary and flatbed cutting demands by fulfilling the highest requirements.

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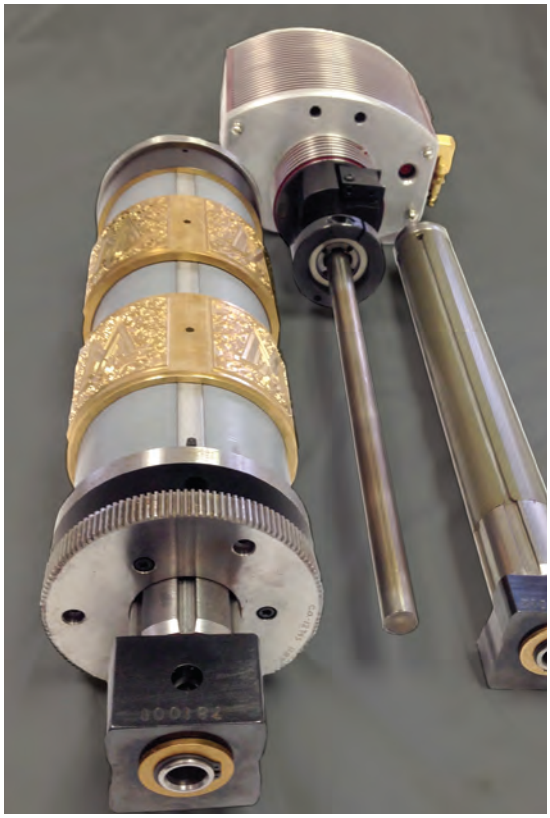


LABELEXPO AMERICAS 2014

RotoMetrics

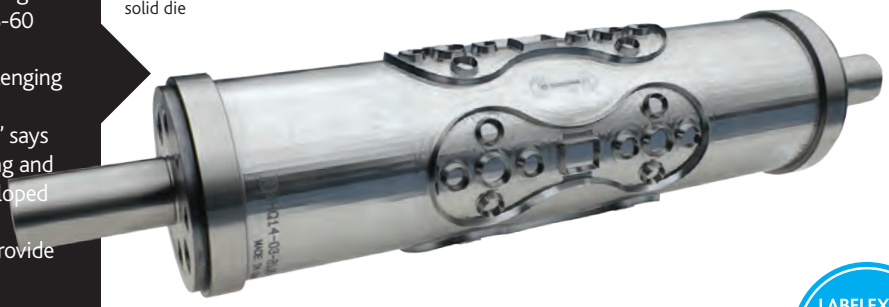
RotoMetrics debuted at Labelexpo Americas its new through-hardened, machine-finished RD300 solid die. The die is designed for cutting disposable medical substrates, dust-sensitive labels and tags, in-mold labels, synthetic gasket, Velcro, Tyvek and electronic components. The RD300 has a high chromium D2 steel grade body finished with a specialized heat-treating process that provides a full-depth hardness of 58-60 Rockwell.

'The RD300 offers a clear advantage over challenging materials commonly found in the converting of electronics, automotive and healthcare products,' says Harrison Chien, vice-president of global marketing and business development for RotoMetrics. 'We developed the RD300 based on very specific feedback from converters. The market requires a tool that can provide cleaner cuts for heavy fiber content.

Clockwise from top left: Pantec Rhino integrated into Gallus TCS250 semi-rotary press

New DMS Ring Die system

Rotometrics RD300 solid die



Flatbed tooling

There has been a significant trend towards flatbed foil stamping and embossing dies, either on off-line machines or, increasingly, as part of inline narrow web presses. This is driven in particular by the decorative demands of the wine label industry and for the manufacture of textured papers by label converters.

This trend has certainly been noticed by the UEI Group, which has stepped up its research and development and technical/educational support in this area.

A new UEI Group product is UniLock-Up plates and dies, which have been used in the sheet-fed industry for several years and are now becoming available to the narrow web industry for use on in-line flatbed systems.

UEI takes the converter's press file and manufactures all of the dies, regardless of whether foil stamping, embossing, texture, Unifraxion or combination stamping. These are locked down onto one steel plate, which is then mounted onto the presses chase, eliminating the need for multiple set-ups. The assembly is simply removed for storage and later use.

"There has been a significant trend towards flatbed foil stamping and embossing dies"

The UniLock-Up narrow web flatbed system is not currently available for all narrow web presses, so interested converters should consult directly with UEI Group.

A trend noted by the company is for

LABELEXPO AMERICAS 2014

Electro Optic

Electro Optic demonstrated its latest Gold Line Special dies for cutting on ultra-thin PET liner materials of ≤19µ (0,00075in), a special surface treatment to meet the requirements of beverage and related labels, as well as solutions for Global MDO face materials.

To maintain tolerances during these die cutting operations, Electro Optic introduced its Gap Feeler gauge, which gives the operator vital information about the condition of the die-cutting unit. The Gap Feeler gauge is inserted between the magnetic cylinder and anvil roller and the slit dimension can be determined by laying the gauge on the measuring scale supplied. The gap can be measured within one micron. Only a few measurements are sufficient to provide an accurate picture of the runout accuracy, parallelism and gap between the magnetic cylinder and anvil roller.

Electro Optic's Erwin Lindl says: 'It is often forgotten that the most stressed part in the cutting unit is the anvil roller and not the magnetic cylinders. Therefore, as part of regular press maintenance it is highly recommended to check the true gap state of the anvil roller.

Left: Wink GapControl assembly
Below: Wink GapControl

LABELEXPO AMERICAS 2014

Wink

Wink launched in North America its GapControl adjustable anvil roller. The system uses double-sided gap adjustment and its stability allows cutting-through (metal-to-metal), with the stability to operate on larger working widths at high production speeds. The system was launched at Labelexpo Europe 2013 and will now be rolled out to other global markets.

For cutting onto thin filmic liners, Wink showed its SuperCut flexible dies with a new blade geometry and minimum height tolerances of ±2-micron. As an option, Wink offers its ProShift technology for staggered die-cutting. The staggering of labels in web direction reduces the length of the simultaneously cutting transversal lines, so that the cutting pressure can be considerably reduced. This helps protect the liner material.

For highly abrasive thermal face materials Wink demonstrated its ultra-hard MCR coating.

LABELEXPO AMERICAS 2014

ETI cuts on .72 liner

At Labelexpo Americas, ETI demonstrated its Mini-Cohesio laminate manufacturing machine equipped with the new heavy duty Pellicut die-cutting unit. This compact equipment can manufacture and die-cut PS labels on a .72mm (18-micron) liner without die marks, at a speed of 500ft/min (150m/min).

A key feature of the Pellicut is the ability to eliminate high or low points on a flexible die. The unit comes on a cassette that can be retrofitted to existing Cohesio machines. Cutting up to 750ft/min has been demonstrated by ETI.

The complete Mini-Cohesio plus Pellicut line is just 24ft long (7.3m) with a 13in (300mm) web width. The material used during the show was a reverse-printed 2mm (50-micron) BOPP pre-printed on a rotogravure press and a .72mm (18-micron) PET liner, with adhesive and silicone applied on the Mini-Cohesio machine. Then both webs were laminated and die-cut with the Pellicut technology to form a roll of PS labels.

'Reverse print means the image is trapped, so there is no need for over-lamination or UV varnish to protect the print,' says ETI president Maxime Baylzelon. 'The beverage industry loves that the print is protected by BOPP.'

Bayzelon said that every Cohesio machine produced over the last 24 months is equipped to manufacture in linerlesss mode, but the Pellicut technology allows the liner to be down-gauged from 1.4mm to .72mm.

converters to make their own high value textured papers on-press, and UEI Group has developed a line of textures which allow the pattern to be placed anywhere on the label, as opposed to having the entire label patterned. This can be applied with a UniSphere Texture cylinder and is available for both flatbed and rotary installations.

A related field is security enhancements, for which UEI has launched a new line of SEC patterns designed to be decorative and provide authentication benefits. SEC patterns can be incorporated into virtually any design and UEI is also able to create custom SEC patterns to meet a customer's specific needs. SEC patterns are also available for both round and flatbed dies.

Pantec has pioneered the development of flatbed foil/embossing systems on rotary presses, and has seen a rising demand for its Rhino unit, particularly for wine labeling applications. Eight Rhino units have been installed in two years on Gallus' TCS semi-rotary presses, for example. In these cases, a typical configuration is CMYK print before the Rhino, then up to three offset spot colors after the Rhino along with a screen and a semi-rotary die-cutting unit.

'Now the integration of other semi-rotary machines is technically possible as with the Gallus TCS,' says Pantac managing director Peter Frei.

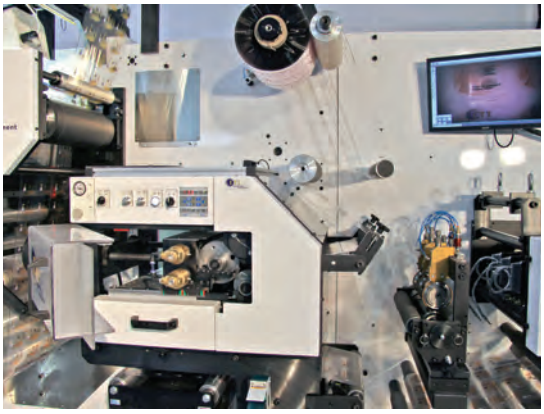
On the rotary side, Pantec reports great success for its Swift foil saver on global toiletries brands. The unit can apply up to 200,000 registered foils or holograms per hour.

Nilpeter has developed its own in-line flatbed foil stamping/embossing, the FP-4, seen at Labelexpo in Chicago on an FA-4* press line.

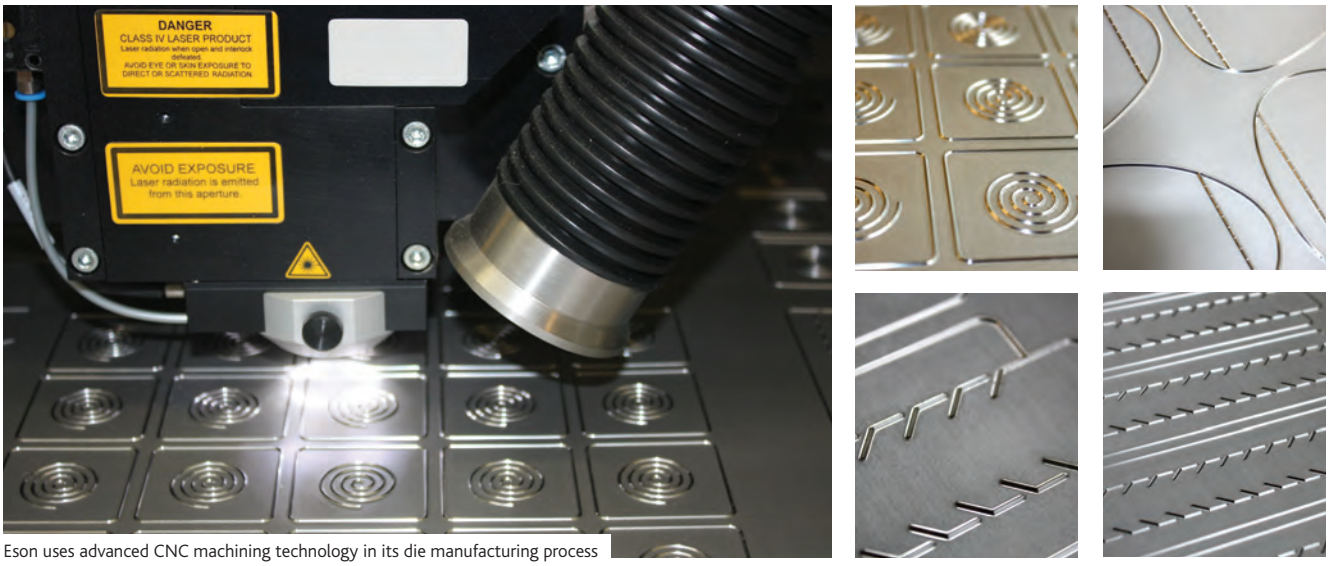
Off-line finishing specialist Newfoil Machines has also noticed a rise in demand for its flatbed foil stamping/embossing systems, particularly driven by the reduction in batch quantities.

'Flat tooling has many advantages, including the quality of engraving available, the depth of embossing achievable, and ease of adjustment for registration to print,' says the company. 'The option to use combination tools where stamping and embossing is performed in one operation, using one tool, eliminates registration problems.

The company notes that new forms



ETI Mini-Cohesio with Pellicut



Eson uses advanced CNC machining technology in its die manufacturing process

Eson gets tough on flexible dies

Eson has plans over the coming years to enhance its position in the flexible dies market, writes ***David Pittman***

Founded in 2000 in the Czech Republic, flexible die specialist Eson has established itself as a major presence in the European labels and packaging converting industry.

The company manufactures a full range of cutting dies, rotary, semi-rotary and flat. Dies are produced with a blade height of up to 1mm and cutting angles of 50-110 degrees. The blade height is produced with a tolerance of +/- 0.003mm and a planar tolerance of +/- 0.002mm, using advanced CNC machining technology with its own internal blade height control that is automated and requires no human intervention.

Other products it fabricates include tooling for hot stamping, printing and magnetic cylinders, rotary tools and die for sheet-fed offset applications.

One of its most recent developments is the NTP coating, a special hard coating developed with the core purpose of extending the life of standard flexible dies, and making them suitable for processing abrasive thermal papers and cardboard.

"The future will include a presence at Labelexpo Europe 2015 taking place in Brussels in September"

Eson's standard flexible dies are suited to processing a variety of self-adhesive and non-self-adhesive materials, while laser-hardened dies are more tailored to cutting especially hard or tough materials, and have a service life two to three times longer than standard dies. An NTP coating can be applied to both standard and laser-hardened dies. The unique coating machine used with NTP is fully digitized with possibility to set up a required thickness and allows coating to be added gradually after each micron.

Eson said NTP coatings significantly extend the service life of standard flexible dies and also offers a very low friction co-efficient of 0.3-0.4, meaning adhesives don't stick so readily to the die's blades, while the cutting edges have a hardness rating of 60-63 HRC on the Rockwell scale, a hardness scale based on indentation hardness of a material.

The Rockwell test determines the hardness by measuring the depth of penetration of an indenter under a large load compared to the penetration made by a pre-load. There are different scales, denoted by a single letter, A-G, that use different loads or indenters, including steel spheres and diamond cones. In the case of the C scale a 120-degree diamond cone is used with a load of 150 kilogram-force (kgf). A hardness rating of 55-66 is regarded as typical of very hard steels as found in chisels and quality knife blades.

Eson's standard flexible dies record a cutting edge hardness rating of 48-50 HRC, while its laser hardened dies are reported at 65-68. Both can be finished using NTP or DLC, Eson's other coating offering that is suitable for the separation of inks and adhesives coupled with a long service life.

Looking to the future, Eson states that enhanced service life of its products is to be the bedrock of future developments, including a focus on more products and coatings to assist its customers in achieving the maximum from their flexible dies, both in terms of productivity and longevity.

The future will also include a presence at Labelexpo Europe 2015, taking place September 29 to October 2 in Brussels, Belgium and for which planning is already well underway, plus growth in the company's geographical presence.

Eson already has representation widely across Europe, particularly in eastern Europe, but has recently started distribution into South America, and now has a foothold in the Russian market.

Customers can also submit orders online using a web form via the Eson website, with the orders dropping into the inbox of its designer team, who then check, inspect and qualify the order for production. Electronic file transmission coupled with the previously mentioned advanced CNC machines, and other systems, mean finished tools can be shipped to customers in as little as 24 hours. Eson notes that the coating of dies does not extend delivery times, and adds that further investment in its production facilities in the form of further digitization of its final formatting of finished die shapes will ensure high precision formats, productivity and production reliability.

Development of the systems and technologies used in its production environment is an ongoing process for Eson, with a production increase of around 15 percent each year helping to fuel its continuous efforts to provide customers with new systems and technologies to improve the quality and effectiveness of their flexible dies. This is occurring at a time when many in the label industry are looking to grow their business into new markets, and which Eson hopes will help provide label printers and converters with the tools to make the most of new business opportunities.

Industrial labeling

In the first of a new series of articles on the unique requirements of the industrial labels sector, ***Andy Thomas*** assesses the impact of the GHS regulations and looks at demanding PCB labeling sector

Preparing for GHS

The key event in the industrial label sector is the transition to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) regime. This will require chemical manufacturers to re-document and re-label all chemical products by the 2015 deadline date. The United Nations international mandate is intended to provide consistency of content, use of symbols, and some aspects of design.

'One point of confusion with many converters is the question of the need for certification of the labelstock,' notes Julie Billing, roll product manager for Spinnaker Coating. 'The fact is, there is no certification or testing process required for confirming the suitability of labels for GHS use. There is a misconception that British Maritime Standard 5609 is the certifying test for GHS, but in fact OSHA's GHS document never mentions BS 5609.'

Billing points out that while the BS 5609 test is appropriate in determining if a labelstock is suitable for drums that will travel over the oceans, this test is specifically performed on aluminum. 'It is not an indicator of how a particular labelstock will perform on other chemical containers, such as plastic totes, pails, textured surfaces - all of which are commonly used in the industrial chemical market – or under different application conditions.'

So, how do you know if you have the right labelstock for a chemical product? 'It is critical to understand the application and environmental conditions when specifying any label, and the same questions apply to chemical labeling,' says Billing. 'There are dozens of questions one could ask, but we see seven as the key considerations for specifying the right label for the job.'

Those include:

- What is the application temperature?
- What is the service range temperature the label will experience in the life cycle of the product?
- How will the label be dispensed – by machine or by hand?
- What is the substrate? What type of material, and is it textured or smooth?
- What print types and processes will be used – flexo only, or will variable data be added via laser or thermal transfer printing?
- What environmental conditions will the labeled product experience? For example, will it be used indoors; outdoors; or, will it get wet?
- What is its expected life?

It is only when these questions have been answered that Spinnaker Coating can select the right combination from its dozens of pressure sensitive labelstocks appropriate for chemical applications. Products for pails, totes, and drums are available, with service life varying from three to 24 months and suitable for either laser or thermal transfer printing.

Certified print system

In preparation for GHS, FLEXcon has collaborated with ITW Security and Brand Identity Group to qualify a combination of drum label materials and resin thermal transfer ribbons that meet the GHS standard, as well as BS5609 Section 3 for the chemical and petroleum market. FLEXcon's Drumcal

INDUSTRIAL BRIEFS

Franklin water-based PSA now BS 5609 certified

Franklin Adhesives & Polymers' Covinax 383-19 water-based PSA has been certified for marine use to Section 2 BS 5609: 1986 when coated on white vinyl face on paper liner.

The vinyl acrylic copolymer maintains a strong bond over a wide range of temperatures and extreme conditions – including extended submersion in the ocean. It has optimum balance of peel and shear for these applications and works on many surfaces, most notably, on corrugate box, stainless steel and most polymeric surfaces. Covinax 383-19 is coater-ready, resists cold flow and die cuts and converts well, giving dry edges to finished sheets and rolls, says the manufacturer.

Left to right above: Wide range of industrial label applications - photo courtesy Avery Dennison

Laser-imaged industrial label

Typical industrial label applications, courtesy Polyonics

line can now be printed with ITW Security and Brand Identity Group's resin ribbons for 2-color and flat head thermal transfer printers, meeting the latest GHS requirements for drum label plaque cards to be variable printed with both red and black ink.

FLEXcon, ITW Security and Brand Identity Group have gone a step further by working with Printer OEMs such as Microplex and CAB to qualify their substrate/film combinations on those printers.

Both of these companies make dual-head printers with the red and black printing capabilities required to produce GHS-compliant drum labels. The joint program allows users to buy a complete package of film, ribbon and printers to produce drum labels that have already been BS5609 Section 3 certified, and meet GHS standards for chemical and petroleum companies.

FLEXcon has meanwhile expanded its Drumcal line to include Drumcal 51932, a 2.3 mil white, thermal transfer printable PP product.

Olivier Moreau, product manager at Armor, also stresses the importance of choosing the correct thermal transfer printer for GHS compliant labels: 'Certain TT printers are fitted with two print units for 2-color printing during a single run, straightforwardly fulfilling the requirements of the GHS standard – printing of symbols in red and black. This is the case for printers in the CAB XC series, using flat-head technology, and the Carl Valentin DuoPrint series, using Near-edge technology.' Armor offers a range of black and red ink ribbons approved under the BS5609 standard.

In other GHS-related developments, Avery Dennison has expanded its GHS-compliant Select Solutions Drum portfolio. In addition to BS 5609 Section 2 certification, the company's drum labeling materials are now BS 5609 Section 3 certified for Epson on-demand color inkjet printers.

UPM Raflatac is now promoting its print-on-demand portfolio, which includes options for chemical drum labels printed via toner, ink-jet and thermal transfer methods, along with a range of durability options. Select VIP films conform to the BS5609 standard sections two and three.

INDUSTRIAL BRIEFS

Tactile Nameplates

Frimpeks has developed a screen tactile coating suited for industrial applications. 'Our 13555 coating can withstand handling and environments that most tactile coatings fail to hold up to, making it a perfect fit for industrial nameplate applications,' says the manufacturer.

Industrial print options

Although Thermal Transfer is the most widely used method for printing GHS compliant and other industrial labels, UV inkjet manufacturers are making a strong case. Andy Cook, managing director of FFEI – which manufacturers the Graphium press – makes the case for combining UV inkjet with conventional flexo finishing: 'Industrial label requirements generally include printing on specific substrates with the right adhesives and applying appropriate coatings after printing to protect the label from a potentially arduous environment. Combining digital with the benefits of inline more traditional print processes can create a very efficient and reliable production system.'

One converter which is using UV inkjet to target the industrial label market is family-owned PDQ Manufacturing, Inc. in Ellijay, Georgia, which has used its INX NW140 press to do chemical labeling work for industrial and institutional private label detergents for over a year.

Brad Drost, PDQ Manufacturing's VP and technical director, explains: 'Our label production processes are focused on multiple container sizes. Our run lengths range from less than 50 labels to over 10,000 of a given image, and the frequency of printing is normally dictated by a customer's order pattern, typically every two to six weeks.'

Extreme resistance

A key area for research and development in high performance industrial labeling is polyimides. Laser markable labels (LML) constructed with polyimide films are well suited for high temperature and harsh environment track and trace applications, and represent an alternative

INDUSTRIAL BRIEFS

Herma acrylic dispersion good for industrial uses

Using its multi-layer coating technology, Herma has developed a plasticizer-free, acrylate-based dispersion adhesive that is compatible with a wide variety of difficult surfaces found in industrial label applications. 65Tpc adhesive is suitable for a broad array of materials, including polyurethane and expanded polystyrene, rough PE canisters, tyres, metal castings and wooden pallets.

Although Herma 65Tpc adhesive has a fairly high coat weight, a second layer endows it with high cohesive (internal) strength. This significantly reduces adhesive bleeding, so that the coating can be applied to the whole label without omitting certain areas or the edges.

Since the dispersion adhesive does not contain any plasticizers, it does not attack or bleed through either the surface to which the label is attached or the label itself.

Above left: UPM Raflatac introduces energy labelling materials.

Above right: Avery Dennison launches GHS compliant drum label range

INDUSTRIAL BRIEFS

Removable energy labels

According to the EU's Energy Labelling Directive 2010/30/EU, products' energy efficiency ratings have to be clearly labeled to guide decisions by purchasers. UPM Raflatac has developed a series of removable label materials to meet these requirements.

White goods like refrigerators, washing machines and dryers as well as TVs, window glazing and air-conditioning units have been included in the scope of Energy Labelling Directive for some time. More product groups are gradually being included, with vacuum cleaners among the most recent products to require energy labels.

UPM Raflatac energy labeling solutions offer filmic, coated paper and digital label faces with a choice of removable and ultra-removable adhesives selected for different types of surfaces and levels of smoothness or texture.

Following purchase, the labels can be easily removed without tearing and surfaces remain free from adhesive residue. Water-based and UV-acrylic adhesives offer more environmentally sound alternatives to solvent-based products.

to PET or acrylics technologies.

Polyonics has been at the forefront of much of this research. 'Polyimide greatly improves the label's long term durability, increases tensile and dielectric strengths, expands the operational temperature range and increases the resistance to PCB, automotive and aerospace chemicals,' says Dave Genest, the company's product manager.

Polyimide LML materials include black and white cross-linked polymer coatings that can be ablated with a wide variety of low power lasers including CO2, Fiber, YAG, Vanadate and UV. 'These coatings also offer high abrasion resistance and, in concert with polyimide, provide the LML materials with longer-term durability than PET and acrylic LML materials and traditional thermal transfer printed labels as well,' says Genest.

Laser-marked labels with high-resolution linear and 2D barcodes also provide a more uniform and higher contrast background compared to direct part marking (DPM), says Genest. 'LMLs also simplify the DPM rework process by allowing relabeling and repositioning of labels in cases of component failures and/or rejections. The black LMLs also offer ESD protection in the form of static dissipation - surface resistances of 104 to 109 Ohms) – along with low tribocharging that limits the charges generated when the liners are removed to less than 100v.'

Thermal transfer printing is also suitable for labels operating under extreme environmental conditions. Armor's halogen-free AXR8 range of resin inks, for example, is designed to withstand the extreme conditions found in printed circuit board identification. The company adds that component miniaturization has encouraged the use of small characters and 2D barcodes requiring durable printing that is clearly legible both to the naked eye and optical scanners.

INDUSTRIAL BRIEFS

Nastar adds DT linerless material

Nastar has introduced two Direct Thermal products to its Linerless Temporary Adhesive offerings. They are available with both full gum and pattern-coated adhesives.

SWDTX - T2 is a repositionable adhesive and a printable food grade non-silicone release. It is classified as a repulpable temporary adhesive, according to TAPPI UM213, certifying the material can be recycled. The printable release allows the labels to be color coded or printed flexo on both the face and adhesive side. SWDTZ - T1055 Temporary Adhesive is a traditional silicone release, temporarily permanent and permanently removable from a wide range of surfaces.

When coated with a discontinuous cross web 'dot' adhesive pattern, the material layout allows for printers to cut without coming in contact with the adhesive.

Applications include warehousing and distribution, electronics, retail point of sale, food safety, industrial, and healthcare. The material has been qualified on major printer manufacturers' machines.

INDUSTRIAL BRIEFS

Polyonics marks metal

Manufacturers in the metals processing industry face many challenges when it comes to track and trace applications of hot metals such as coils or rolls. These metals can be exposed to ultra-high temperatures and tracking is critical for efficiency in manufacturing lines.

Polyonics has developed a double coated, five mil polyimide hang tag for these applications that is thermal transfer printable on both sides. The XF-610 has a high gloss, white printable finish on one side and a matte finish on the back side. This material is designed to be hole-punched by mechanical die and attached by metal wire or strap.

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Making water-based coatings stick

Nick Coombes looks at new technology from Vetaphone that allows water-based inks and adhesives to be used on raw BOPP without a primer.

Today, the use of water-based inks and adhesives on raw BOPP is limited, without the added use of an expensive primer. The reason behind this is the limitation of the materials' ability to react with oxygen, resulting in a maximum obtainable surface tension of 46 dyn/cm, after using corona treatment. The only solution today is to buy BOPP that is already primed or has an inline primer for the purpose. The disadvantages of this are added cost, the fact that the primer is solvent based, and the total material thickness is greater.

With the new EASI-Plasma technology developed by Danish manufacturer Vetaphone,

it is possible to obtain up to 60 dynes on BOPP, with by far the industry's lowest gas consumption, according to Vetaphone project manager Ronni Nielsen. 'With such reduced running costs, an ROI of as little as 12 months has been tried and proven in a commercial environment.'

To explain how this is possible, we need to look at the chemistry of the BOPP surface. Corona is an electrical discharge, typically ranging between 30 and 40 kV. With this discharge, existing molecule chains are broken and new ones are created. The new molecule chains on the surface are mainly created from the oxygen in the 'air gap' from the uncontrolled atmosphere that surrounds us. The O2 molecules break into O-atoms, which then connect with the CH-based groups on the surface of the plastic film, creating the molecule chains that are shown on Figure 1.

The bi-product of this is that the Oxygen atoms combine into Ozone (O3), which then is removed from the area by the mandatory exhaust on the Corona treater.

EASI-Plasma shares some similarity with Corona, as the electrical discharge is achieved in the same way. But unlike Corona, which uses an uncontrolled atmosphere, EASI-Plasma works only with a highly controlled atmosphere, which for this application is Nitrogen based. By removing all the Oxygen, and replacing it by a controlled Nitrogen based atmosphere, EASI-Plasma is able to graft specific molecule chains on top of the surface. When aiming for high dyne levels on BOPP, the desired molecule chains created are predominantly Amine, Amide and Imide groups, as shown below in on Figure 2. But in addition, by removing Oxygen from the air-gap, there no longer any Ozone created.

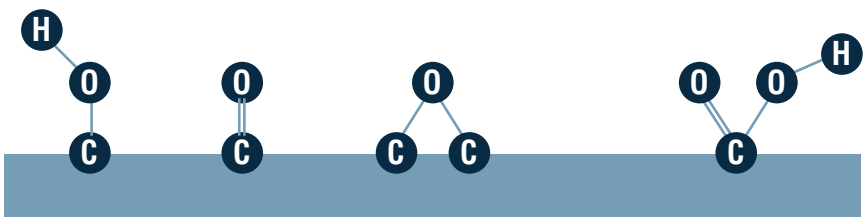
But just creating the required molecule groups is not enough. 'The knowledge of how to treat the surface evenly to the same dyne level, with the lowest possible amount of consumables, is the key to making the best and cheapest product,' explains Ronni Nielsen. 'The secret lies in how to create the correct mix of molecule groups on each specific material in a highly controlled atmosphere.'

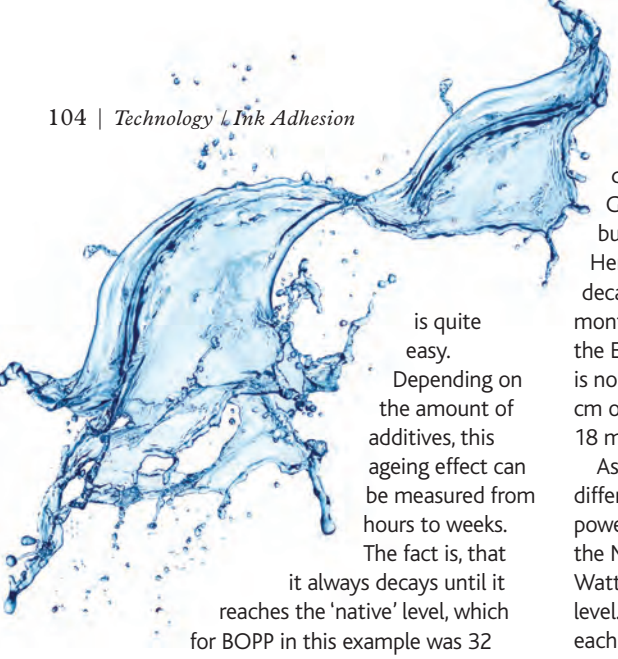
The difference between corona and the two types of EASI-Plasma treatment suited for high dyne levels on BOPP is illustrated on Figure 3.

The chart shows the limitation of oxidisation of the surface. After reaching 46 dyn/cm with Corona, merely increasing the power applied will not improve the surface tension further. However, with EASI-Plasma Standard Grafting, 56 dyn/cm were obtainable on this specific BOPP material, and by using Advanced Grafting, the EASI-Plasma treatment was able to obtain a surface tension of 60 dyn/cm. It's worth noting that just as with corona treatment, these two types of treatment do not benefit from increasing the power still further.

Looking at what EASI-Plasma does to the surface, is the reason that in the past people in the industry have concluded that it is a new and improved corona treatment, says Nielsen. But, to reach an accurate conclusion, you really need to look at all the variables involved. At the end of the day, the price per square metre of material is what matters. The consumers don't really care how the plastic film was produced. For many materials, it is still possible to obtain a significant surface adhesion from corona, so for these materials changing to EASI-Plasma, would give little benefit. However, there is one great advantage of EASI-Plasma, which is that it does not necessarily need to be done inline. The reason behind this can be found in the condition known as 'ageing'. After corona treatment, the additives in the plastic film 'try to get back to the surface'. With the molecular structure that corona has created on the surface, this

Figure 1. Coronal treatment





is quite easy.

Depending on the amount of additives, this ageing effect can be measured from hours to weeks. The fact is, that it always decays until it reaches the 'native' level, which for BOPP in this example was 32 dyn/cm.

The chart shows that the Corona treated material starts to decay, and within two months has aged back to its 'native' 32 dyn/cm. The EASI-Plasma Standard Grafting also decays at a similar pace, but the ageing stops at a higher level. Here, for example, it is 48 dyn/cm, before decaying slightly to 46 dyn/cm after six 6 months, where it stabilises. However, with the EASI-Plasma Advanced Grafting, there is no ageing at all. The achieved 60 dyn/cm on BOPP stays at that level even after 18 months.

As is the case with corona, when using different materials, you need a different power per square area, also known as the Material Factor, which is measured in Watt·min/m2, to reach the desired dyne level. Not only is this factor different for each material, but even the same material from different suppliers can result in different Material Factor requirements, depending on the exact chemistry the producer is using to manufacture the product.

For EASI-Plasma it is not only the Material Factor that needs to be changed according to the material, but also the atmosphere, to create high and lasting dyne levels. By changing the gas-mix, which is all the

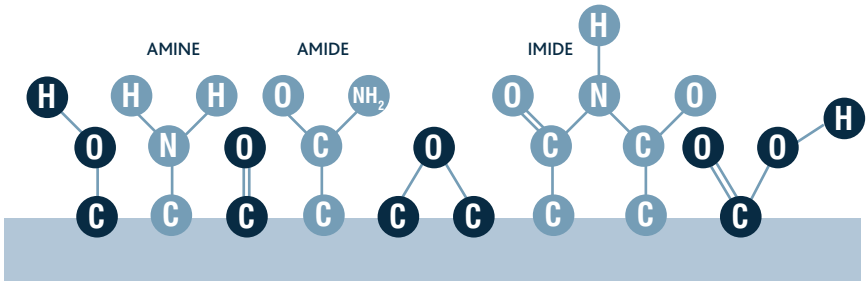
"This technology is by no means totally new. It has been used for in laboratories since the 1990s. 'The difference now, is that it has moved to commercial production machines"

Nitrogen based atmosphere really is, it is possible to tune the amount of the different molecule groups, as shown below in Figure 3.

'The exact gas-mix is easily created in the Vetaphone laboratory, and all the gasses needed are available from any of the gas suppliers around the globe,' says Ronni Nielsen.

'The typical added running cost, compared with Corona, is between 0,30-0,50 ¢/m2. The gas consumption of an EASI-Plasma system

Figure 2. EASI-Plasma treatment



is less than half that of any other system on the market today. And, not only does the system consume less gas, but the gas is also royalty free, meaning it can be bought from whichever supplier the customer chooses.'

To date, the specific materials that Vetaphone has proven to obtain higher dyne levels with EASI-Plasma than corona are: PP, OPP, BOPP, PVC, PET, and PVDC. The specific materials that Vetaphone has so far proven to obtain longer lasting dyne levels with EASI-Plasma are: BOPP, Fluorinated Polymers (FEP, ETFE, ECTFE), PE, PLA, COC, COP, and Textile. And that is just the beginning, because the recipe for many more materials will become available in the future as the Vetaphone chemists continue their R&D in the industry.

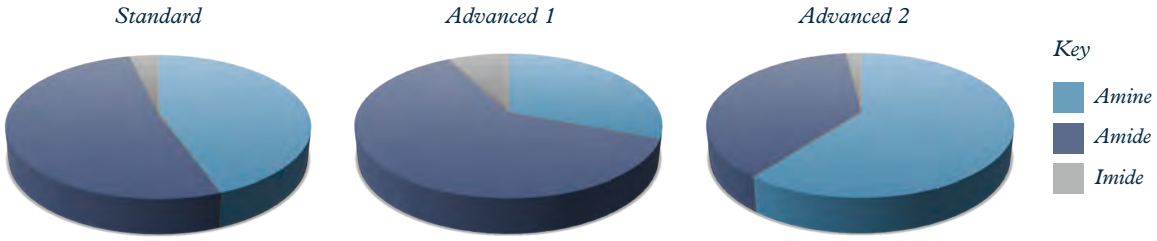
But, as Nielson explains, this technology is by no means totally new. It has been used for in laboratories since the 1990s. 'The difference now, is that it has moved to commercial production machines.'

In the past, the main limitation has been that the equipment available could not control the atmosphere, explains Nielson. 'The solution from the suppliers of that technology was simply to increase the consumption of gas, which for small machines, low speeds, and short runs, proved in part to be successful. But by solving the problem this way, the producers in the market had created a situation where there was no return on their investment. Added to which, the equipment was sold only with a contract, where the producer had to buy the gas from the machine supplier. Clearly, this gave them no incentive to make the system more gas efficient. The other major problem was a lack of control of the atmosphere, even with high gas consumption, so the treatment was uneven. This is why this type of equipment never really made it into a production environment.'

EASI-Plasma offers a solution to these known problems, continues Nielsen. 'Not only is gas consumption lowered significantly, but the atmosphere is controlled throughout the entire production process, monitoring the influential factors and adjusting flow and gas mix accordingly. Today, as proof of quality, the customer can see logs of consumption, measurements of power, gas mix, and other deciding factors that ensure the atmosphere is controlled, and the process is within specification.'

With no limitations on speed or width of the treatment, EASI-Plasma now gives users the ability to see it work on small-scale laboratory machines, and also in full size commercial production. Converters looking to know more about EASI-Plasma can sign up for Vetaphone's free open house event where the technology can be seen in action. It will be held on the 25th March at the CPI facility in Peynier, France.

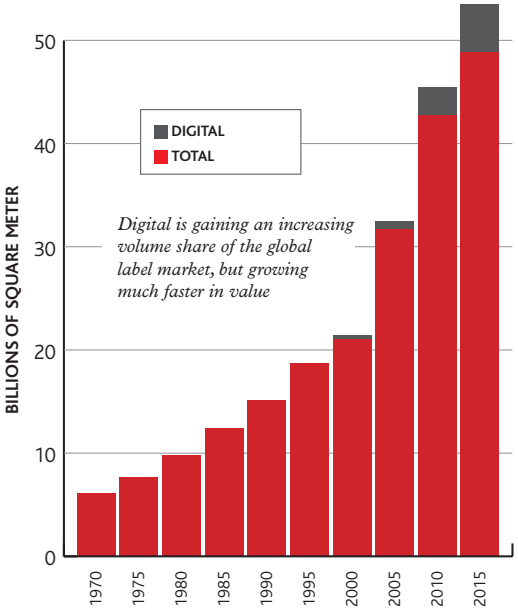
Figure 3. Fig 5 EASI-Plasma Gas Mix



Label trends: how digital printing is impacting the label industry

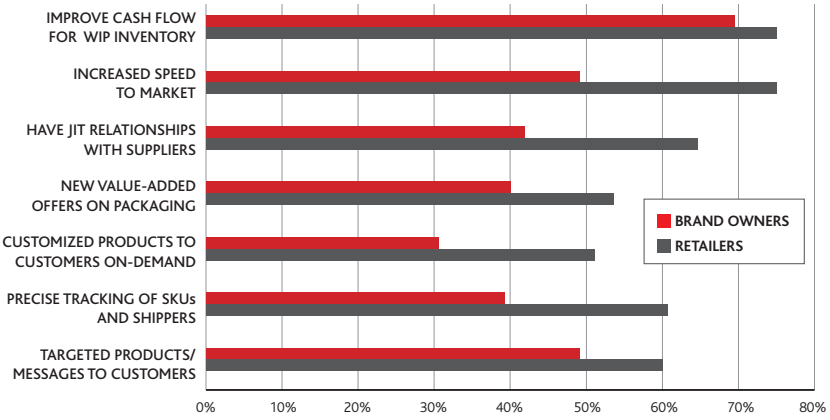
Digital printing in the label and package printing sector is on the rise. More products around the world are adopting the technology to change the way brands engage with consumers. Information below is sourced from the new Karstedt Partners Digital Print for Brand Owners Report and a handful of leading press suppliers.

Global label growth 1970 - 2015 (Billions of square meters)

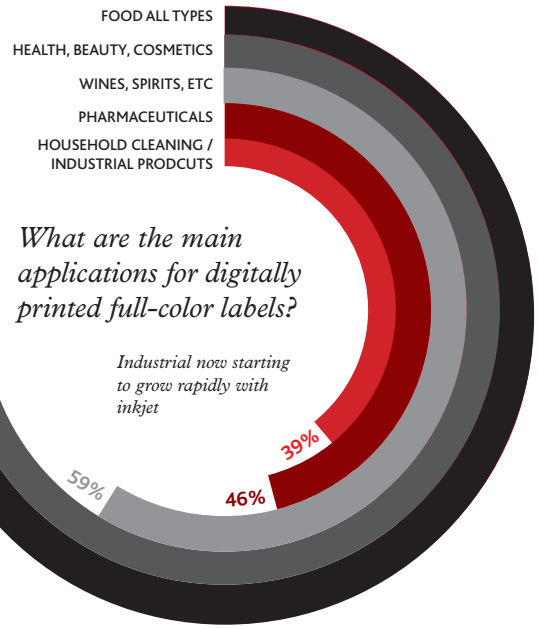


Source: Karstedt Partners

Brand Owners and retailers view of the Digital Value Proposition



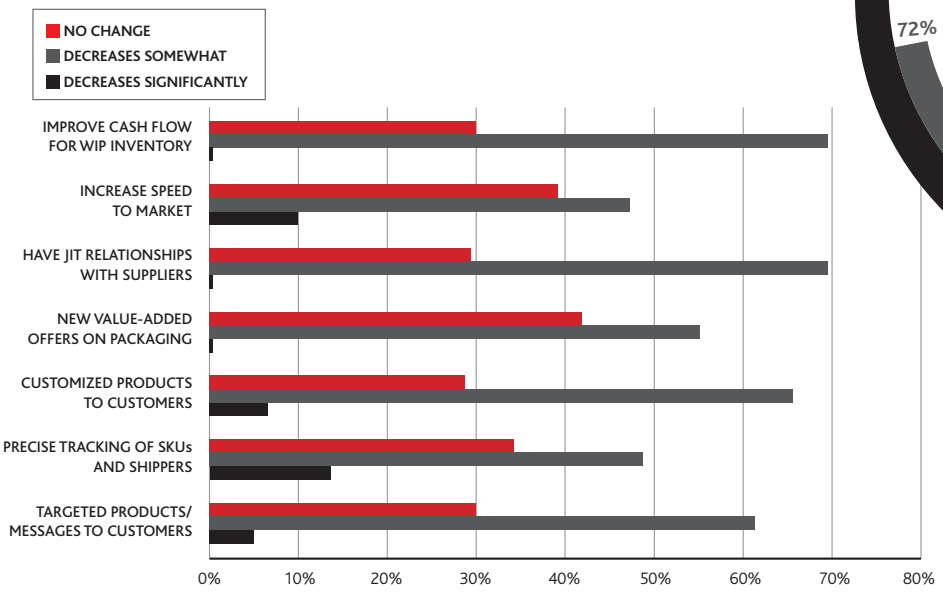
Source: Karstedt Partners



What are the main applications for digitally printed full-color labels?

Industrial now starting to grow rapidly with inkjet

Would brand owners be willing to pay more for specific digital print values?



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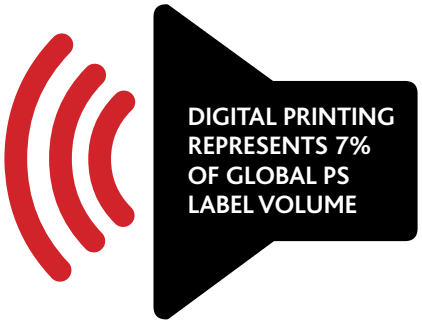

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Johnson & Johnson lays out sustainability criteria

John Li, senior packaging development manager at Johnson & Johnson Consumer Group Asia-Pacific, emphasized the importance of sustainability from a global brand owner perspective in a keynote address at Labelexpo South China.

Li was sharing a platform with UPM Raflatac, as the two companies have done a lot of work together on finding sustainable labeling options, *writes Andy Thomas*.

Johnson & Johnson's global Healthy Future 2014 program is designed to give practical effect to a long-standing commitment to preserve the environment and natural resources, and Li stressed that sustainability must go hand in hand with profitability. 'It is not realistic to talk one without the other. You can plant trees but they will not survive if there is no profit.'

Johnson & Johnson aims to design for sustainability using benchmarks derived from a Life Cycle Analysis, said Li.

Sustainable design criteria include: is it designed to minimize waste; can it be smaller or lighter; is it designed to be durable or multi-functional; does it use renewable resources; is reuse practice and encouraged; is it made with post-consumer materials; do the materials come in less toxic form; does it come from a socially and environmentally responsible company; is it make locally?'

'We are using recyclable materials and we are asking for renewable and sustainable materials at a reasonable cost.'

Li praised the work carried out by Coca-Cola in China, as the only company turning recycled food packaging back into food packaging.

'China has prohibited the use of recycled products for food and this is the only exception so far. This allows many uses of the same material, so we try to work with them to see if we can also use it.'

Biodegradable materials represent a dilemma, Li explained: 'There are many biodegradable materials, but if they are edible corns, it will create conflict between human consumption and industrial usage. This is the classic bio-diesel dilemma and will create new social conflicts.'

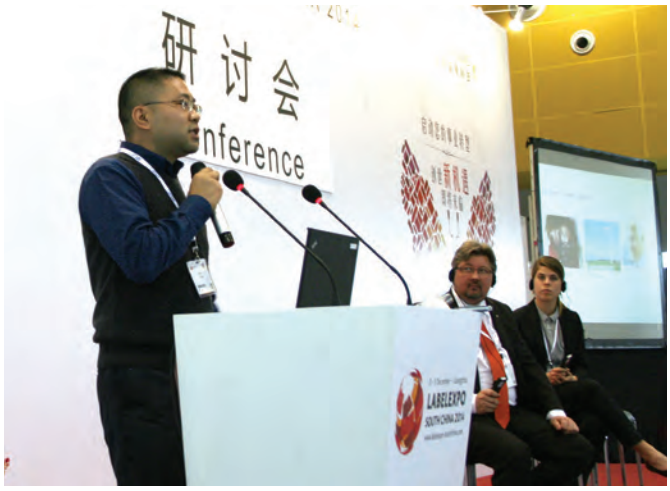
The company often has to be pragmatic in its choices. So although it banned PVC five years ago, there are still some pharma applications where no replacement is available. 'If you know that you can help, then let us know.'

Another complication is that not all countries have access to Life Cycle Analysis data. 'This is why we developed a new tool just for our internal use we called Earthwards,' said Li. 'We have just put it onto our website so it's available to the public and means we can always monitor and assess our performance.'

Earthwards also tries to assess 'indirect' sustainability benefits. 'For example loading trucks in a way that reduces fuel consumption, or developing a new formula for medicine which means you take less tablets, so use less packaging. That is hard to quantify.'

Price is not always the most important factor. 'We require our vendors to supply sustainable and ethical products, and UPM Raflatac knows us very well and our requirements. Sometimes we have vendors come in with a good quality product but with a cheap price so we know it cannot possibly be produced sustainably.'

Concluding, Li encouraged packaging suppliers to apply for Earthwards designation. 'Packaging engineers can help control the fate of our planet. I encourage you to work on sustainability.'



Label SOCIETY

CONLATINGRAF congress, Colombia

Above L-R: Juan Manuel del Corral Suescun, president of security document printer Grupo Cadena and winner of the Benjamin Hurtado award for services to the graphic arts industry; María Alexandra Gruesso, president of Colombian association ANDIGRAF; Fabian Ruíz president of the board, ANDIGRAF; and Norma García, GSB marketing manager MCA, Hewlett Packard Company. Below, Right: Fabio Arrunda Mortara, vice-president of Brazilian association ABIGRAF; Gustavo Morales, president of Latin American association CONLATINGRAF. A full report of the event will appear in Issue 1.

TLMI annual meeting, California

Top Clockwise: Kevin Hayes, Outlook Group; Eric Hoendervangers, MPS. Emily Kroll, Durst Image Technology US; Alex Elezaj, Whitlam Label. Matt Fyfe, Meech International; Dan Galovic, Innovia Films; Lou Iovoli, Hammer Packaging.

LMAI awards night, Labelexpo India

Clockwise from L: Anygraphics sweeps 10 awards. The Weldon Celloplast team at the Awards night. The Avery Dennison team at LMAI Awards. Sanjeev Sondhi, managing director of Zircon Technologies with Sunil Kokane of Technova and Pradeep Saroha. Chandan Khanna, managing director, Ajanta Packaging with Sachin Arya, general manager, Baddi Unit of Ajanta

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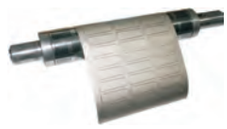

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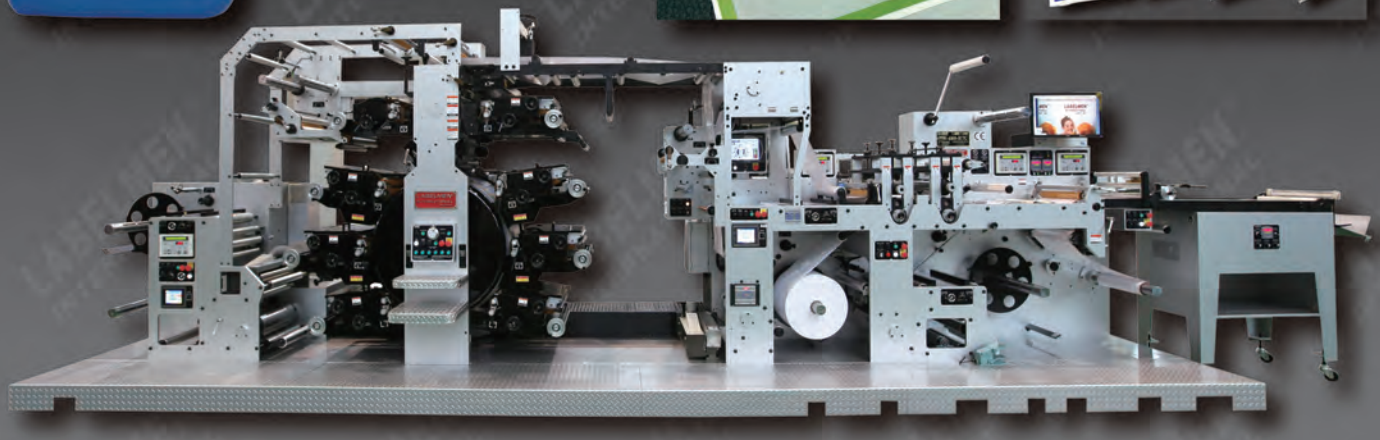

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