Volume 24 Issue 9

Labels & Labelling

World of labels & narrow web

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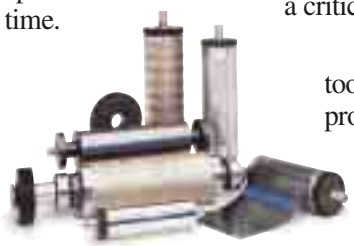

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Leader

With more converters looking for ways to add value to their operations, we launch in this issue the second edition of our Web Packaging supplement. There are two key markets opening up here – folding cartons and flexible packaging – which traditionally have been converted on, respectively, sheetfed offset machines and wider web flexo or gravure presses. In-line production of folding cartons on narrow web machines has already proven successful - providing that the right applications are targeted in terms of run length, level of decoration and carton format. The key factor is the converting end of the press. It is critical that the rotary tooling does not send shocks up the press which will throw out registration, and at the same time end users are looking for the same cut/crease quality they get from the offset industry. Getting it right is a tough job.

Film packaging is in many ways a more interesting area for narrow web converters. Opportunities are opening up here as run lengths of everything from wraparound labels to shrink sleeves and flexible packaging products continue to come down. We know that wider web converters are either looking at buying narrow/mid-web in-line presses to take on the shorter run work, or are looking to partner with narrow web converters who can meet the required quality and film handling requirements.

> "There is also an interesting cross-over with one of the fastest growing labeling technologies – unsupported films"

There is also an interesting cross-over with one of the fastest growing labeling technologies – unsupported films, especially for shrinkwraps, stretchwraps and wraparound labels. As Natalie Martin's feature on beverage decoration in this issue shows, a high level of flexibility is now pretty much a pre-requisite in this market sector, as brand managers push the decoration envelope in an area of intense retail space competition.

This month also sees the launch of Labelexpo China, to be held in December 2003 in Shanghai. China is a booming market with an increasingly sophisticated narrow web converting sector. Both Avery Dennison (see inside this L&L) and Raflatac have recently expanded their production facilities in China to take advantage of the move of global brand manufacturing to the country, while Nilpeter (through its partnership with MAN Roland), Gallus-Heidelberg and HP Indigo have already announced plans to expand their presence on the ground.

Andy Thomas
Group Managing Editor

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The smell of Christmas is in the air again, the end of another year is coming around. We would like to thank all of you who sweetened your production with dies and tools from Kocher + Beck in 2002, and wish you a great start to the New Year. So now – go ahead and enjoy Grandma's cookies.

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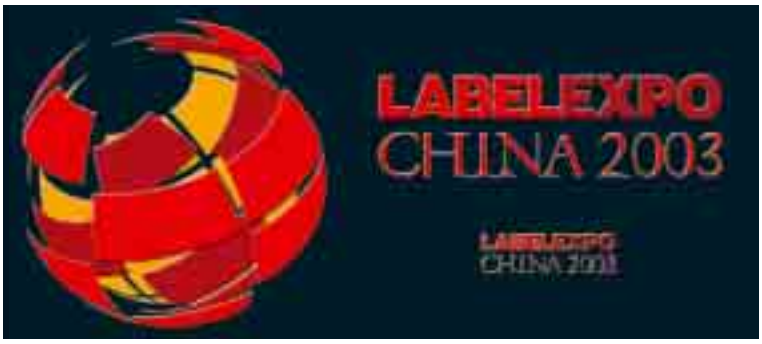
Labelexpo goes

As China embraces the world community through its membership of the WTO and hosting the 2008 Olympics, great opportunities are opening up for converters and suppliers of labels. Now Labelexpo China plans to bring the latest developments to the Chinese industry. **Andy Thomas** reports



Labelexpo is to be extended beyond its current international portfolio in Europe, America and Singapore into China. The inaugural Labelexpo China, will be held at the Intex Exhibition Centre in Shanghai on 9th-11th December 2003.

Initially conference led, the biennial event will fulfil the need for education and ideas sharing in this part of the Far East. The Chinese are hungry for new technologies and it is important that local suppliers and printers are fully aware of national and international labelling standards, global branding issues, advances in label materials, pre-press and production technology, as well as the latest requirements for logistics and distribution labelling. Large numbers of Chinese printers and converters find it difficult to leave the country due to the financial cost and visa restrictions - meaning that they are not attending other international events.

In addition, with China's new membership of the World Trade Organisation, overseas companies are targeting China as an export and manufacturing base, making it the largest, and fastest growing, potential emerging market for the world of labels. Labelexpo China offers a unique opportunity to become acquainted with the growth potential and opportunities in China, as well as the specific Chinese label market issues and opportunities.

Industry expert, Mike Fairley will be putting together the conference programme. Speakers will be predominately drawn from the Chinese market and include government officials, global brand owners, suppliers and printers. It is also planned to include some label printer case histories and success stories. The conference will be complemented by a comprehensive exhibition of label industry suppliers.

Roger Pellow, Labels Group Event & Publishing Director, said, 'We are very excited about the launch of Labelexpo China, the latest addition to our world-wide Labelexpo portfolio. Preliminary research has shown that all the major labelling players will be at the event – whether exhibiting or taking part in the conference – and the Chinese are looking forward to the modern business opportunities that will become available to them. The event is going to be extremely high profile in the region.'

Labelexpo China is supported by FINAT and sponsored by L&L sister magazine Labels & Labelling Asia-Pacific, which will be available in printed form and over the internet in a Chinese translation from next year.

Labelexpo China will run alternate years with Labelexpo Asia, held in Singapore. The Singapore event caters primarily to the South East Asian economy and is attended by a large number of printers from India and Australia.

Further information can be found at www.labelexpo-china.com

- Further Labelexpo dates:
  - Labelexpo Europe 2003
    24th-27th September, Parc des Expositions, Brussels
  - Labelexpo Americas 2004
    14th-16th September, Donald E Stephens Convention Centre, Chicago
  - Labelexpo Asia 2004
    23rd-25th November, Singapore Expo Centre

to China

China's packaging industry is still in its infancy. In the country with the largest population on earth, only recently has any attention been directed toward attractive package design to promote sales. Like packaging itself, Chinese labeling technology is also in its early stages. It is difficult to quantify the volume of simple glue-applied labels, while consumption of pressure sensitive labels in relation to the population is currently very small. New technologies such as sleeve labels and IML are now in use. They need improvement including better technology and production skills. Driving forces behind technological development are the international Fast Moving Consumer Goods (FMC) groups who are transferring their specifications to China, expecting to achieve the same quality level as elsewhere in the world. This is driving local suppliers to produce world quality products, pretty much from a standing start.

Concentration

The Chinese print industry is concentrated in two centres – in the south around Guangdong Province – also servicing the Hong Kong market – and Shanghai, where Labelexpo China is being held. Shanghai is boom town. In the space of just a few years it has built an international airport (Pudong) elevated downtown circle road, outer motorway ring almost completely encircling the town, motorways to the bordering provinces, two new underground rail lines, 5-6 international shopping arcades with all the world-class brands you can imagine, a new financial center (Lu Jia Zui), Shanghai Stock Exchange, pedestrian tourist tunnel connecting Pudong Lu Jia Zui with the Puxi side and more besides.

The projects now under construction are new bridges and tunnels, a magnetic levitation train with German technology from Pudong to the new international airport, a new international exhibition center, and many houses and offices.

The speed of development is breathtakingly rapid. China expert Brigitte Wolff also notes that China needs the help of foreign experts to keep the speed of development to avoid social problems such as unemployment, and a key objective is to make local companies competitive in the world market.

'China's government is interested in a friendly relationship and friendship with other countries. The country is steadily improving although bribery and corruption still exist. Some risks are present as are many chances for opportunity.'

Wolff points out that the environment for foreign investments is no more difficult than in other developing countries.■

Labelexpo Americas

In part II of our Labelexpo Americas review, **Andy Thomas** looks at developments in materials across a wide range from pressure sensitives to monofoils

LABELEXPO AMERICAS 2002

Labelexpo Americas 2002 marked Raflatac's entry as a key player in the North American market, following the fall 2001 opening of its $50M manufacturing facility in Fletcher, NC, and the announcement of the proposed acquisition of MACtac by parent company UPM-Kymmene.

MACtac showed three new products at the show under its own banner.

The company launched a breakaway tag stock with clean, die-cut edges, a 'smudge-resistant' paperstock for continuous feed impact and laser printers, and White Radiance, a white film used for all-body squeezable applications like hair care containers and body lotion tubes.

FLEXcon launched a range of new products for the high end labels market, including a line of conformable polypropylenes designed for semi-squeeze/rigid containers. Other new products included THINflex 1.6 mil topcoated hard clear PP and polyesters compatible with thermal transfer, laser, impact and electron beam print technologies, as well as conventional UV screen, letterpress and flexo inks.

In the area of removable and promotional labels, Green Bay Packaging introuced its intruiging Microsphere technology, where label 'movability' comes from a random layer of microscopic spherical particles. The company claims Microsphere-treated labels will remove cleanly from corrugated, glossy papers, glass and plastics.

Ahlstrom Labelpack introduced to the US its Extrachrome X3 white, high gloss paper facestock, claimed to equal the appearance of cast-coated, and Silca Speed liner base for converting at speeds up to 1000 m/min.

Acpo showed its new line of high end specialty base-stock products for the prime label market, including 'no label look' materials.

Polinas Plastic of America launched new shrink, pearlized and transparent label films, while Plastic Suppliers also showcased a new range of shrink label films.

ExxonMobil Chemical showcased several additions to its portfolio of Label-Lyte labeling solutions and launched an exciting development in hot melt and cold glue application for cut and stack technologies, as well as a new coating technology for pressure sensitive labels.

UCB Films, Inc. displayed a BOPP graphic arts film that resists UV degradation for up to two years and a new ready-to-use metallised label facestock. The company also introduced tothe US films for peel, re-seal and removable applications.

For converters who want to manufacture and print their own laminates, ETI showcased its upgraded Cohesio converting machine, now with an in-line die cut unit. Its counterpart, the Metronome, is an innovative flexo printing system to accom-

E-business

Develoments in e-business solutions were an important theme at the show. Avery Dennison introduced its RollXchange.com program to North America, a web-based trading site for surplus roll materials, with credit, collection and delivery logistics all handled by Avery. Raflatac showcased a live demo of its newly developed 'business line' that delivers comprehensive, customized customer data such as invoices, pricelists, statistics and reports.

Release and coating developments

- Dow Corning showed a new range of UV cure materials which enable coating of a wider variety of thermal-sensitive substrates. The Syl-Off brand UV cure solventless silicone release coatings expand the company's offerings to the fast-growing filmic applications market.
- Wausau Coated Products introduced new ranges of tinted and/or colored silicone, pattern coated silicones and adhesives.
- Rhodia Silicones launched three new products: A hold-out additive to improve coating quality and lower coating costs of emulsion silicone systems; a UV-Curable claimed to produce a release profile equivalent to a thermal solventless system; and a low temperature curing thermal solventless silicone system for coating thermally sensitive substrates
- Saint-Gobain Performance Plastics introduced a new film technology for chemical and UV protection of face stocks.
- Wacker Silicones' new products included a new anti-mist additive for high speed coating. The company also featured solutions for production of polyester release liners.
- GE Silicones introduced a new line of silicone release coatings.

pany the Cohesio. Expect to see more about this in future editions of L&L.

On the security front, ITW Holographics introduced its iSCAN system, which produces fast, customised 2D holograms.

3M highlighted its new line of Radiant Label Materials, which shimmer and shift with changes in viewing angle, light source, and color of the labeled surface.

Nakai displayed foils with print-over capability when used with UV silkscreen inks, high-speed foils for rotary hot stamping applications and products designed for Cold Foiling.

Another key trend was the continued opening up of what we might call 'multiple decoration paths', expanding beyond pressure-sensitive materials and into a wide range of monofoils.

The change was marked by the presence of Avery Dennison's Engineered Films Division on a separate booth, focusing on its new 2.4M Roll-Fed PP high shrink film as well as the company's In-Mold films.

And following UPM/Raflatac's acquisition of MACtac, it will be interesting to see what happens to MACtac's linkages with Bemis company Curwood, a supplier of flexible packaging solutions for customers in the food, beverage, household, industrial and personal care industries. Curwood made a big splash at the show talking about possibilities for narrow web converters to move into flexible packaging applications.

- *Next issue concludes our show coverage with a look at inks and converting systems.*

Thermals

Thermal transfer applications were well catered for. For those wishing to use color, thermal transfer ribbon specialist Armor introduced Colorpack, available in wax, wax/resin and resin formulations.

Dynic USA Corporation exhibited new high-speed ribbons (24 i.p.s capability) and 5 new colors of C3 ribbon.

Wet glue forum examines industry challenges

Issues of e-business, changing market requirements and new technologies were on the agenda for the first-ever wet-glue label industry forum recently held in France. **Mike Fairley** reports.

The first ever forum of the European Association for the Wet Glue Labelling Industry (ELMA) took place in the impressive surroundings of the Chateau Hotel Mont Royal, a XVIIIth century style chateau nestled at the base of the Chantilly forest near Paris, on the 26th and 27th September.

Representatives from many of Europe's leading label printers and key industry suppliers made up the near sixty delegates who came together to listen to a strong line-up of speakers and topics across the whole wet-glue label industry value chain, as well as having the opportunity for industry networking during a welcome cocktail reception and dinner.

In opening the forum ELMA president Jacques Schor highlighted some of the many issues facing the industry in a period of rapid change. These included the speed of globalisation, adverse economic trends, the increasing use of e-commerce and e-auctions, and the possibility of a war in the middle-east. It was to address many of these issues that the panel of speakers had been brought together.

The first speaker, Rick Amado, covered the topic of 'B2B e-business, the next five years', explaining that the goal of e-business was to enable more effective collaboration among trading partners. "Already," he said "some 95% of large European firms are doing or planning to do e-business – with 42% currently implementing a strategy. By 2004, e-business is expected to account for around ¤2,500 billion of world wide trade."

Three possible e-business strategies were outlined in the presentation: join a consortium; do it yourself with key customers; outsource generic processes and message brokerage. In practice, most company's expectations were for working with multiple e-business strategies by 2004.

As far as ELMA was concerned Amado made a number of suggested recommendations for the association: become involved in creating e-business standards for the wet glue industry, particularly for information sharing and logistics; focus on end-user needs; modify standards used in the chemical and electronics industries for the wet glue sector; and get printers and converters involved in the process.

Following on from this speaker, Werner Boysen of Boysen Consulting, talked about 'e-supported purchasing power' and highlighted some of the key lessons learnt from failed e-purchasing projects. These included blindness because of vision-based enthusiasm, business models not thought through, a lack of business process integration, all-rounder expectations towards e-business tools, and a lack of systems acceptance by suppliers. To this could be added insufficient project management experience.

> "It's all down to who can contribute to the supply chain the most efficiently"
>
> **Mike Fairley, consultant editor Labels & Labelling**

"Today" he explained "purchasing management have increasingly more effect on the bottom line of companies than ever before." Some of the implications of this were that the principle of reverse auctions would become an important tool for brand companies and contract packers – seriously affecting converters and traders. Converters therefore needed to realise their existing improvement potential by developing individual e-business strategies, with e-purchasing an integral part of this. "Business processes are standardised by e-business" added Mr Boysen " and are thus able to be more efficient and more flexible."

Continuing the e-business theme, Mike Fairley of Labels & Labelling Consultancy, looked at 'An e-future for the world of labels – from e-commerce to e-production.' This presentation reviewed what brand owner buyers expect from their label suppliers, which today includes cost reduction and process improvement, printers to embrace new print management techniques, and printers to work harder in the way they deal with customers. What they want is for the purchasing of labels to be a good experience. Unfortunately, that is not always currently the case.

"For the label buyer" Fairley explained "e-procurement enables them to look for key benefits. Benefits which range from:

- consolidation of the supplier base
- more competitive market quotes
- improved supply chain management
- the elimination or reduction of inventory
- consolidated buying across multiple companies and countries
- capturing of efficiencies to improve pricing
- better management of logistics requirements."

At the end of the day, he explained, "Its all down to who can contribute to the supply chain the most efficiently. The label buyer's requirement is not so much in the actual cost of the products, but in the efficient passage of goods to market, bringing in the necessary components – including labels – as required. The future is about using the internet – from e-commerce through to e-production – to offer new solutions and opportunities to customers."

A different perspective was provided by Stefan Glimm of the European Aluminium Foil Association, with his topic of 'Reverse Auctions – Wild West on the Internet.' Stefan highlighted the fact

> "Key issues today include speed of globalisation and the danger of war in the Middle East"
>
> **Jacques Schor, former ELMA president**

that you cannot have the requirements of quality, innovation – and the lowest price – all the time. There were contradictions to this. In particular the lowest purchase price did not necessarily equal the lowest total cost. It also threatened the 'few' sourcing concept, threatened strategic partnerships, and hindered innovation. He also posed the question "What if they give an auction and nobody comes?"

For Geert Wullaert of S & V Management Consultants the question was more related to 'Business drivers for Optimisation of the Extended Supply Chain – How crucial is the role of technology?' In this he explained that the most important drivers for redesigning the supply chain network were cost reduction (84%) and increased reaction time (71%), with about 25% of the companies having recently centralised stock management. The focus was now on working capital; balancing required capacity and inventory.

"E-technology" he said "can address process orientation and integration in many instances through integrated applications within the company, through integration of different backbone systems into the internal company network, through the integration of e-application tools with backbone systems, and by supporting business processes over an integrated supply chain."

New technologies

In a second key session speakers addressed new technologies in printing, both from the flexo versus offset perspective, and from a supplier versus customer expectation viewpoint. In discussing 'Labels on wide web presses: flexo and gravure considerations' Carlo Ardizzone of Cerutti said that the label market was currently perceived as being either very small runs or very large runs; as a plurality of small centres or a few big plants serving all of Europe; yet logistics made both solutions possible. However, the time needed to change conditions was longer than the time it took to make decisions. There was therefore a risk of investment obsolescence.

Ardizzone went on to discuss gravure press technology for both paper and film and then reviewed the benefits of modern C.I. flexo machines which, he said "gave tight register accuracy within 0.05 mm at all speeds with no register control; better press stability at higher speeds over 150 mt/min; less floor space; a shorter web path length with easier tension control; more productivity due to cnc press management and advanced web inspection ▶

> "The most important driver for redesigning the supply chain is cost reduction"
>
> **Geert Wullaert**
> **S&V Management Consultants**

systems; finer tuning of press functions; more accurate tension control and higher efficiency dryers." Each of these benefits were analysed in more detail in the presentation.

"Labels" he said "accounted for only 5% of the cost of the packaging, while their impact was much greater than this. Their role in product communication, promotion and identification is essential."

Opportunities for paper

'The opportunities for paper-based labels' were the topic of a presentation by Fridolin Leis, Heidelberger Druckmaschinen AG. After reviewing the growth trends and driving forces in the label industry Leis examined the opportunities for paper-based labels and said that process efficiency was the key to success. He highlighted these issues and said that with decreasing run lengths, shorter turnaround times and more complex jobs, then order processing and master making become the dominant cost drivers. Also that press efficiency would be determined by the capabilities of digital workflow.

Michael Nitsche of MAN Roland Druckmaschinen AG followed with a presentation on 'Modern sheet-fed offset techniques for the wet-glue label market.' This reviewed the demand for print – including labels, the types of labels and the focus of label printshops, as well as substrate types, before dividing the market into two key segments; the mass label market, and the premium label market.

The mass market he explained, included mineral water, soft drinks, tins, jars and deep-freeze products, which used both uncoated and coated paper grades and were mostly relatively simple in terms of colour usage, ink coverage and creative design. The premium market on the other hand, required more colours, more ink coverage, more surface finishing and more special effects, with such labels found in the beer, sparkling wine, champagne and spirits, and cosmetics sectors. He then went on to highlight in detail the printing and press requirements for each market.

A detailed presentation on 'New inks for in-line varnishing – problems and solutions versus brightness' was covered by Bruno Delanoë of Sicpa. "The goal" he said "was to achieve a high gloss finish at the best possible price, to undertake lacquering in-line after printing (not off-line), and to have no requirement for a second lacquering operation." From this premise he detailed the various solutions available to the label printer in terms of equipment, inks, equipment costs, ease of process, best results and end cost, concluding that the best quality results came with a total UV solution, that hybrid inks are today a UV solution with UV equipment, that double varnishing is an acceptable and good compromise, and that more solutions with less quality compromise are on the way.

Looking at 'Label management – the printer as a key element in the supply chain' Getrude Eder of Brigl & Bergmeister gave a very thought provoking presentation on the management issues of the label producer. "The most important targets" she explained "were to make the label industry sustainable and profitable, with innovation bringing value to both the business and the product.

"To be successful in the market place a label...

- has to attract attention
- carry the value of the brand
- multiple and complement advertising campaigns
- inform about the product and its volume
- enhance the image of the product
- has to sell at the point of sale
- has to stimulate impulse purchases.

"Essentially, every package or label is a 5-second commercial which aims to establish a long-term relationship with the customer. A brand therefore needs shelf impact, has to promote clear communication of the benefits, and be attractive and inviting to buy." Eder then assessed the management issues needed in delivering these requirements.

The final speaker was Philip Ashcroft of the Campbell Soup Company who explained how his company was using 'e-procurement in practice.' The discussion looked at the benefits of e-procurement to both buyers and suppliers and highlighted that e-negotiations are a real-time internet based price negotiation where prices can only move downwards – hence they gave distinct benefits to the buyer.

"Equally though, e-negotiations offered suppliers a way of saving time and provided the convenience of viewing customers' requirements on-line rather than needing a series of meetings. It also reduced cycle times, enabled multi-parameter bidding so that bidders could highlight all their strengths (so allowing buyers to see a bidder's total value), and provided an opportunity to better understand their competitive position."

Perhaps not unsurprisingly, the audience of label printers – some of whom had been at the wrong end of e-negotiations and e-auctions in the past year – had many questions to ask of the speaker and also the opportunity to state their views on what they saw as the adverse impact of e-procurement on the wet-glue label industry.

All in all, the first ELMA label forum provided delegates with a stimulating and interesting programme of speakers. Many of the messages from the day were very clear and label printers should have been able to leave the event with precise guidelines for the future development of the industry – and of their businesses.

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TLMI ABM

This year's TLMI meeting saw converters and suppliers discussing issues such as eroding margins and over-capacity in the market, as well as possible solutions. **Natalie Martin** reports

More than 65 converters and 100 suppliers attended this year's TLMI Annual Meeting, titled 'Meeting the challenge of change', held in Henderson, Nevada. Members were able to pass TLMI's new mission statement: 'TLMI, a member driven association, provides effective forums to address issues critical to the success of the narrow web, tag, label, packaging and converting industries of North America.' What differs from the previous statement is the inclusion of 'packaging and converting' – no longer is the primary focus on tags and labels. The new wording in this statement demonstrates the significant changes taking place in the labeling industry. Label converters are having to face up to the challenges of possibly diversifying into other niche areas including embracing packaging, whether it be flexible or folding carton to help remain afloat in this industry.

In a lively electronic brainstorming session, members were able to type comments onto laptops placed on each table and cabled up to a main display screen. Asked what concerns the industry currently faced, the answers were revealing.

Eroding profits and margins remained the biggest concern, closely followed by the threat of on-line auctioning. The list included:

- The tag and label business looked at by end users as a commodity' business
- Over-capacity in the market
- Lack of pricing discipline
- Lack of end user loyalty
- Globalization
- Consolidations occurring within a customer set
- Ability to find competent employees
- Impact of carrying customer inventories (JIT)
- A sense that the industry is 'maturing'

Best of Show awarded to Walter Dow (r), president, CEO of Dow Industries by Steve Lee VP, RotoMetrics

Converter of the Year awarded by Tom Polischuk(l), packagePrinting, to Lon Martin, ceo, LGInternational

The above then, constitute the key challenges that today's converters need to overcome. Members were then asked to think of ways to meet these challenges. Some of the suggestions included:

- Converters and suppliers placing themselves in a consultancy role to their customer base – to become a part of the process of defining customer needs
- Make supply chain alliances
- Focus on productivity improvements
- Develop and deliver value added services
- Improve focus on branding
- Increase specialization in niche/growing markets
- Selectively invest in key new technology areas and increase employee training

One converter commented that the industry feedback session was the most useful. 'It gave me a sense not only of the topics of interest and concern to other converters, but also of the emotions involved. People are very emotional about on-line bidding,' said Brad Stillahn, owner of Adstick. 'It's been a couple of years since I attended a TLMI function and I was struck by how much the industry has changed. The combination of consolidation and improving technology – pre-press and printing equipment – has changed the competitive nature of our business dramatically. I attend many conferences each year, often in our customers' industries. Each industry has different characteristics. I was reminded and impressed about how smart and entrepreneurial people are in our industry. TLMI meetings have become a 'must' to stay current!'

Much of the discussion centered around end users who drive packaging, label and product decoration trends and who are constantly turning up the pressure on converters to deliver more effectively but at cut price.

While all the challenges discussed caused people to vent their frustrations, a degree of optimism was also expressed throughout the various sessions. It was agreed that innovative solutions could be an effective way of promoting value added services to end users and to help move the industry forward.

What really stuck out from the group debates was the vital need for more sales training. Sales people have to be more pro-active in developing customer relations and be forthcoming with ideas. 'It's all about service these days' was the catchphrase. ■

TLMI Award Winners

Dow Industries, Inc., Wilmington, MA, won prestigious Best of Show honors in the Tag and Label Manufacturers Institute Inc.'s 25th Annual Awards Competition. Dow Industries was one of 36 companies to win a total of 94 awards in the International competition, which honors the finest labels produced by member converters in North, South and Central America, Europe and Australia.

Dow Industries won the Best of Show Award for its 'Gillette Series Clear Gel' label, which also won first place in the 'multi-process – line and screen/tone – prime' category. Dow also won a second-place award in the same category for its 'Midnight Flowers' entry.

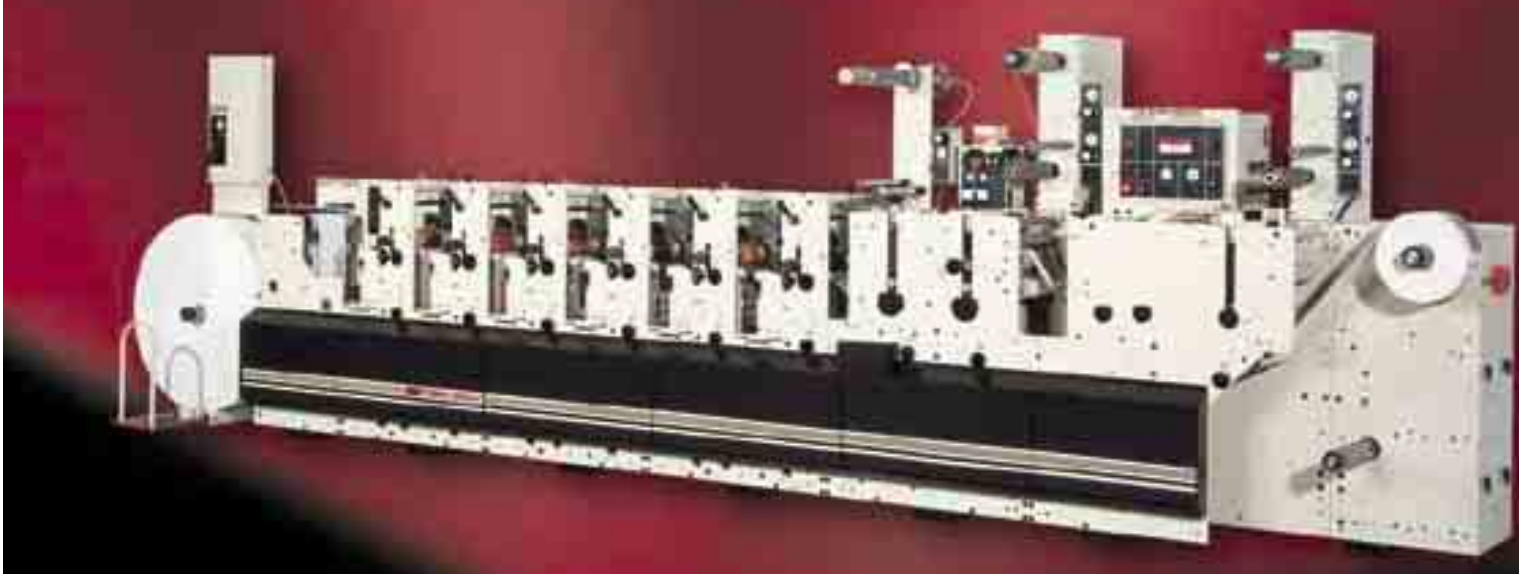
The 25th Annual TLMI Awards Competition drew 264 entries from 46 converter member companies.

A total of 19 companies won multiple awards in the competition, with TAPP Technologies, Langley, British Columbia, Canada, leading all winners with 10 awards in the North American Division. Schreiner Etiketten and Selbstklebetechnik of Germany, and The Label Makers Ltd. of England, led the International Division with five awards each.

Among other multiple-award winners, Collotype Labels, California, North America/Adelaide, South Australia, won eight awards in the International Division, while Spectrum Label Corp., Hayward, CA, won seven in the North American Division. McDowell Label & Screen Printing, Dallas, TX, National Label Co., Lafayette Hills, PA, and Spear, Inc., Mason, OH, won four awards apiece in the North American Division.

Six companies won three awards each in the North American Division, including Blake Printery, a San Luis Obispo, CA-based division of WS Packaging, Inc.; Corporate Express, Fresno, CA; Corporate Express – Document Print & Management, Witchita, KS; Impressive Labels, Safford, AZ; Multi-Color Corp., Cincinnati, OH; and Standard Register Co., Dayton, OH. Germark, S.A., Barcelona, Spain; and Paragon Labels, Lincs, England, each won three awards in the International Division.Companies winning two awards, in addition to Dow Industries, were Whitlam Label Co., Center Line, MI, in the North American Division, and Labelgraphics (Glasgow) Ltd., Glasgow, Scotland, in the International Division. Seventeen companies won a single award. As in previous years, contest entries were received in a number of distinct categories, covering all converting processes involved in the production of tags, pressure sensitive labels and non-pressure sensitive labels.

Judges for this year's competition, which was held in Naperville, IL, included Chairman Steve Lee (Rotometrics); Mike Buystedt (Akzo Nobel Inks Corp.); Pat Hague (Water Ink Technologies); Robert Smithson (Trinity Graphic USA); Roy Webb (Mark Andy, Inc.); Terry Trexler (Gallus, Inc); Paul Teachout (Chromas Technologies); Ray Mackura (Fasson/Avery Dennison), John Little (Nilpeter) and Page Crouch (Clemson University).



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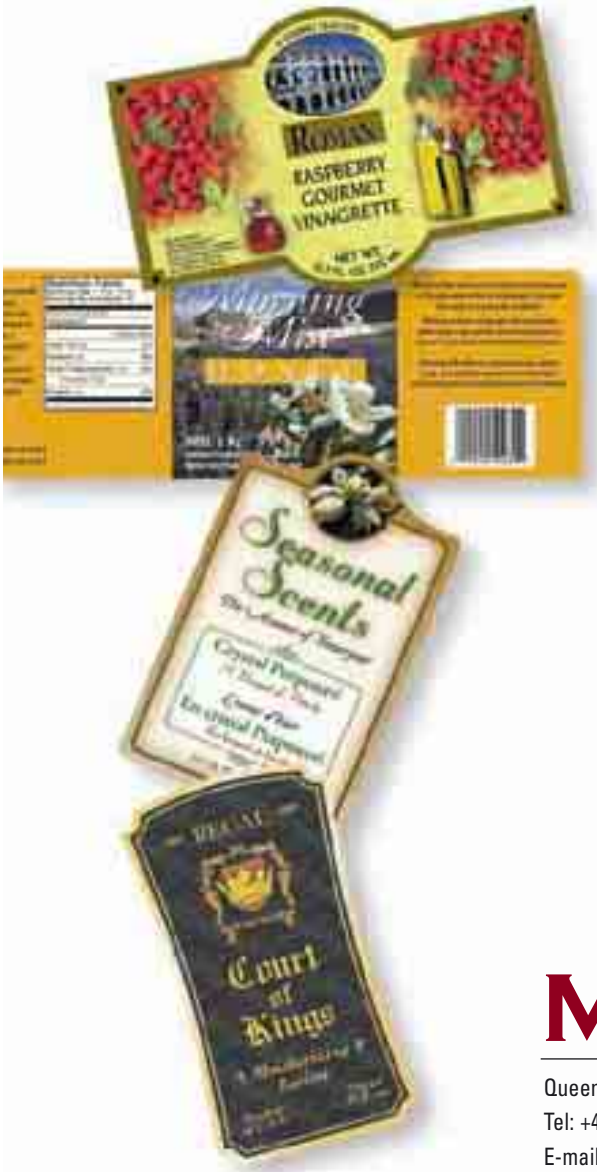

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Brands push to colour control

A recent survey of brand owners has highlighted key issues of brand colours and ink performance. **Mike Fairley** assesses these issues and looks at how one ink company, Akzo Nobel Inks, has responded to the challenges

Colour consistency across multiple substrates

There can be little doubt that labels and packaging are at the forefront of brand owners' requirements for presenting a consistent quality and performance brand identity on their products sold in multiple retail outlets on a national, pan-European or global basis.

Consolidation and rationalisation of brands – whether own brand or private brand – has also been taking place in recent years, and this further strengthens the need for, and global or national demands on, specific brand designs, brand colours and brand identities.

Add to this the continuing trend by multinational groups towards globalisation and total global branding, and the issues of consistency of brand colour and image become even more important – and a real challenge to label and packaging printers and, perhaps even more so, to the leading international manufacturers and suppliers of pre-press technology, substrates and inks.

Perhaps put quite simply, a global brand owner will today requires a global brand identity using brand colours – which need to be consistent worldwide – on a variety of substrates (paper, film, board) by different printing processes (flexo, offset, letterpress, screen, gravure, etc.) and for all types of labels used. Across a complete brand range this might include label types from self-adhesive to in-mould, sleeves to glue applied. What a challenge for everyone in the supply chain.

Even then, the brand colour and consistency issues do not end. For any one brand product or label there may be more than one label or package printer – perhaps as many as 10 or more in different continents and countries. All of these need to be consistent with the printing of the required brand identity, colour and image.

Go further into the brand owners' needs and requirements and the challenges of producing a brand colour that is consistent in every outlet and every application becomes even more of an issue, particularly when different store groups may even have differing in-store lighting standards and colours.

Take Nivea as a product brand for example. The biggest selling skin care brand in the world, and with totally global sales, it has its own special blue colour match for the Nivea logo. Yet this blue will appear different when printed according to the background or border that it appears with. 'In practice therefore' explains Martin Wehmann, Packaging Management cosmed, 'we actually end up having a few different specially mixed Nivea blues across our whole product range.

'We aim to minimise such variations by the implementation of a strategic approach to handling products worldwide. The brand manager specifies the design and product colours to be used, while the packaging management team handle all the global production and marketing requirements. Generally only one printer does each product range, again minimising colour variation issues.

'Print designs (and there can be a lot of new product ▶

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> ‘The major consumer good companies are also looking for regular input from ink suppliers about new types of image or creative effects that can be created with inks, such as tactile inks’

Akzo Nobel Inks works directly with brand owners

lines, product extensions and re-launches each year) are harmonised for Europe, USA, Latin America and Asia and all inks and colours must be performance tested by Beiersdorf AG. These tests include all relevant issues (as product- and abrasive resistance, TESA film Test and environmental requirements).

‘Our aim’ added Hartmut Tiekenheinrich, Department Manager, ‘is to focus on the consumer and for the packaging to be in the right condition. We want to convey an image of wellness and individuality to the user through the pack design and colours.’

‘To keep at the forefront of the market we also need input from suppliers, with ink manufacturers for example, keeping us updated on their latest innovations, being available to help solve ink or colour-related targets or to answer specific questions about inks, varnishes or effects.’

Global brand identity and product image is also key to the success of the Unilever Home & Personal Care Division. Currently completing a project aimed at rationalising to 400 brands worldwide, the company has operating sites in 88 countries – and sells their product range in some 150 countries.

‘The aim’ explains Lara Moutin, the Global Supply Manager, for Flexible Packaging (includes Global Labels portfolio), Home and Personal Care ‘is to move to fewer, but bigger brands, on a global basis. We therefore require consistency of global branding and brand colours worldwide.

‘To achieve this, we are having to look at all our packaging and the issues that brings for inks. Additionally, new brands are being launched, requiring new brand colours and performance standards to be created.

‘Our aim is to build a World Class Supply Chain. That means for us, to become World Class Supply Managers, moving our role into a B2B approach: from buyer to business partner’ explained Lara Moutin. ‘We are also looking to roll-out collaboration with our partners for mutual benefits under market tension. This means taking cost out of the supply chain through brand rationalisation, stand-alone processes, reduction of total cost through the whole value chain, all this leading to reduce stocks and decrease lead times.’

The major consumer good companies are also looking for regular input from ink suppliers about new types of image or creative effects that can be created with inks, such as tactile inks, fragrant inks, raised effects, colour change or matt/gloss ink combinations.

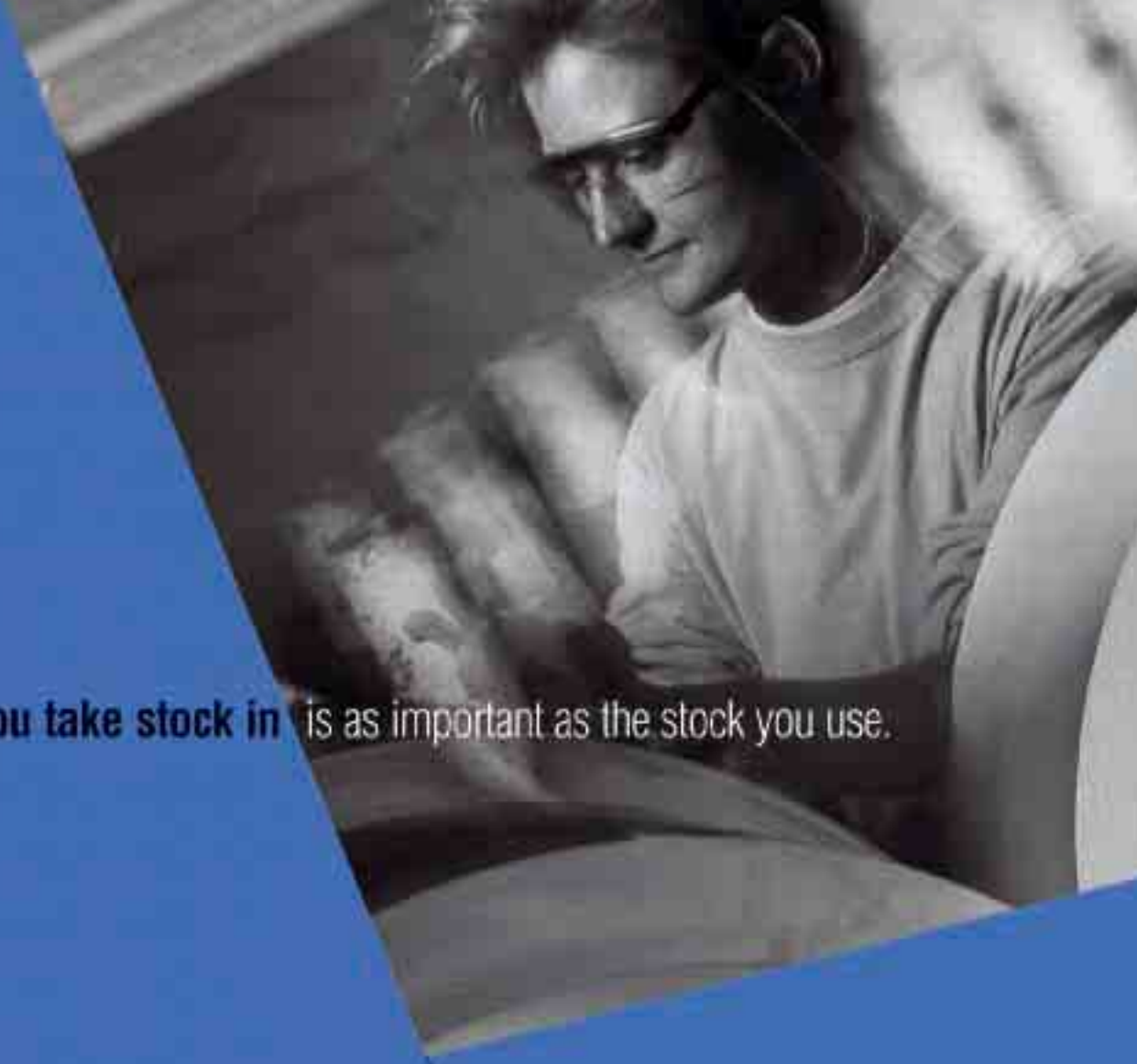
Whilst global brand owners and buying teams are generally looking to work more closely with ink manufacturers and suppliers in enhanced partnerships, the big national supermarket groups generally prefer to keep at arms length from the ink companies.

All Sainsbury’s supermarkets, a UK only store group (except for a wine store in Calais) with almost 12,000 product lines – some 52% of which are own brands – they do not specify inks, only provide ink specifications.

‘It is up to the converter to work with his own ink suppliers to meet our specifications,’ says Keith Brackenborough, Print Services Manager, Packaging Design, at Sainsburys. ‘We would specify colour match, performance, food contact, colour control, consistency, etc. The converter is then responsible for selection of inks, ink supplier and all match and performance criteria.

‘A critical requirement is for colour match and consistency across substrates and processes – by different printers. Colour match has to be under Sainsbury’s store lighting condition (which are different from, say, Marks and Spencer. M&S have bluer store lights; Sainsbury’s are more yellow lights) and the printers we use are expected to have ink mix and match facilities.

‘The printer – or an ink supplier supporting him – must also be able to provide rub testing, mix and match systems, ▶



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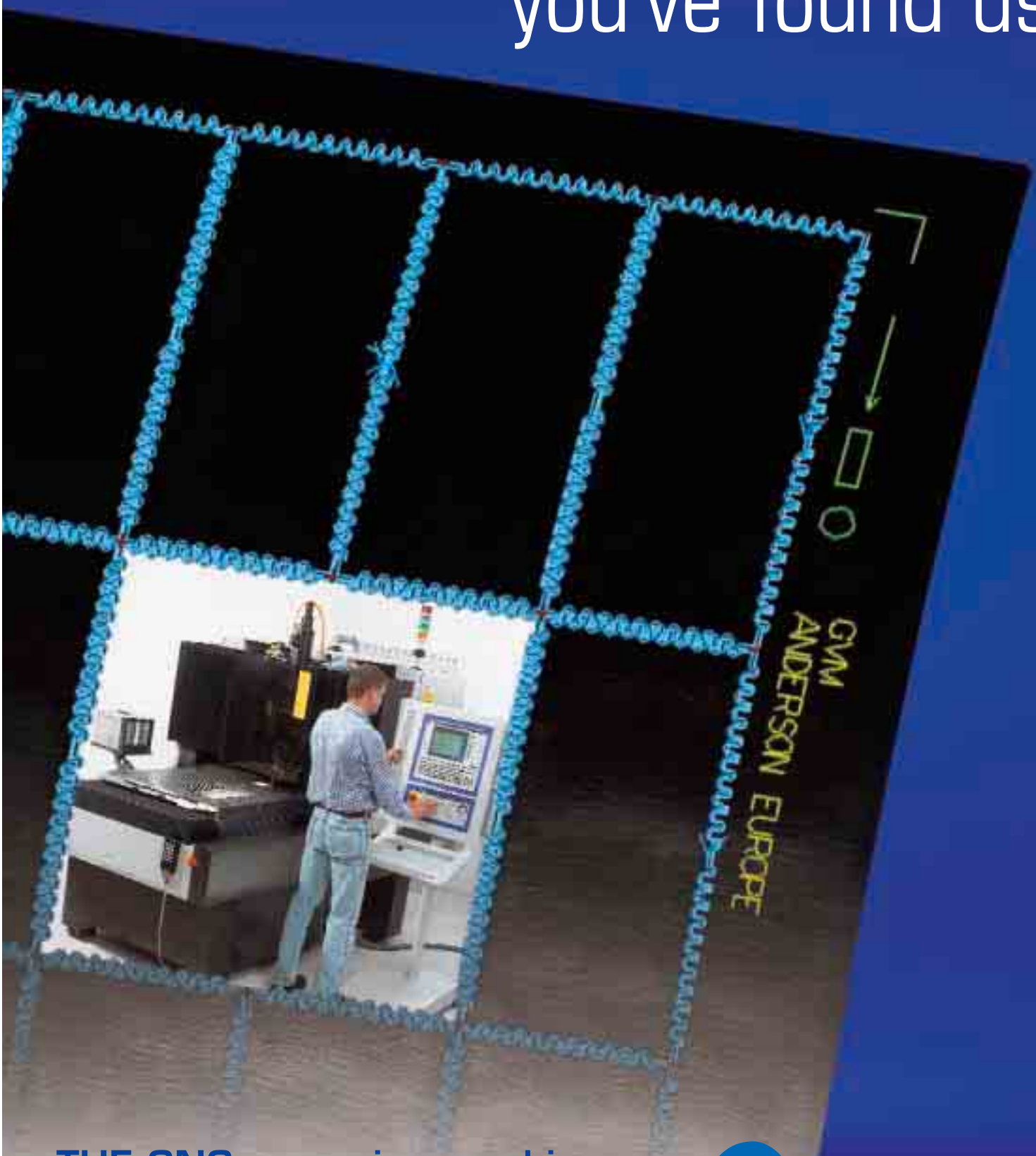

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colour testing, etc. This is not carried out by ourselves. Scratch and adhesion testing is also done by converters (or their suppliers), but to Sainsbury's specifications.'

Although inks, colour and varnishes are one of the most important areas of brand marketing, and more effort now goes into this than ever before at Sainsbury's, it is at the converter level where an ink/converter relationship should be developed.

'A key aim of Sainsbury's' added Keith Brackenborough 'is to achieve the best level of control and consistency, which comes from us working closely in partnership with the printers we use. Only one or two printers do each range of products, including all our 'fresh produce' labels. Additionally, only 4 repro houses are used for the whole product range. All printers we use must meet the BRC/IOP Technical Standard and Protocol for companies manufacturing and supplying food packaging materials for retail branded products.'

Ink specification

British Retail Consortium standards and protocols are also required by label suppliers to Asda supermarkets. Again, explains Steve Pemberton, Managing Director, Label Link, which is the label buying arm for the Asda Group 'we do not specify inks as such, but do specify Pantone colours and our requirements in terms of absolute colour, consistency of colour, etc.

'Approved suppliers can access our information portal on the internet and obtain job specifications, label images, inventory requirements, units of sales, and much more. E-commerce is now being used as a standard.'

What is clear from talking with some of the key global and national brand owner groups is that the challenges facing converters and their suppliers – and particularly the aspiring global ink suppliers – are actually increasing, rather than decreasing. Global consistency of inks and colours, standards and performance, on all substrates and by all printing processes, under differing viewing conditions, and by multiple printers, provides challenges to the ink manufacturer and supplier in an almost unprecedented way.

For Akzo Nobel Inks, who initiated this brand user survey, the results have provided some key pointers and challenges for the future – both for own brand and private brand ultimate end-user customers.

'When looking at brand colours' explains Niklas Olsson, Global Brand Manager, Narrow Web Inks, 'it is important to understand that colour can be both measured and controlled – but standards and a common 'language' are needed. But what colour standards or references should be used? How do you measure and determine the 'right' brand colour? There are no 'instruments' that can tell the Brand Manager that this colour will sell – we still need designers and marketing experts to create the colours they want. Standards and the correct colour metric approach can help them to limit deviations from the standard or 'right' colour when we try to reproduce it.

'The colour of an object depends on three key elements – the

light source, the object itself, and an observer (for example the human eye). We can standardise the light source into many different wave lengths. 'Daylight' used to be the norm, but this varies considerably around the globe and by the time of year. A standard viewing light source therefore needs to be specified and used.

'Reflectance of light from a coloured object can also be measured to produce a reflectance curve which is unique for any object and light condition. This is what is needed to control brand colours. However, this curve and the colour can vary according to factors such as pigment type, resin type, printing process, ink coverage or substrate. For example, a 10% variation in film thickness can result in measurable and visible colour differences.

'If a brand owner requires inks to have a specific resistance then we have a real challenge to match and control the brand colours throughout different printing methods. We can take the necessary steps to formulate according to specific legislative needs – for example toys, where specific requirements relating to heavy metal content and selection of pigment types are necessary.

'So that global brand owners, and their converters, can better understand brand colour requirements and solutions Akzo Nobel Inks has developed a new five point approach:

- Agree on a 'colour standard' with the brand owner which includes the materials to be used as well as light source and resistance properties
- Akzo Nobel Inks will then provide an exact colour match for any print process or material agreed
- Akzo Nobel Inks will provide the tools and systems to offer brand colour protection and end user control
- We will also provide the tools and systems for converters to ensure end user satisfaction
- And provide all the necessary training of printers and brand label buyers in understanding colour and colour control

Continued on page 28 ▶

Avery Dennis expands in South China

As Avery Dennison opens a pressure sensitive labelstock manufacturing plant in Southern China, **Andy Thomas** reports on the latest phase in the company's ambitious expansion program

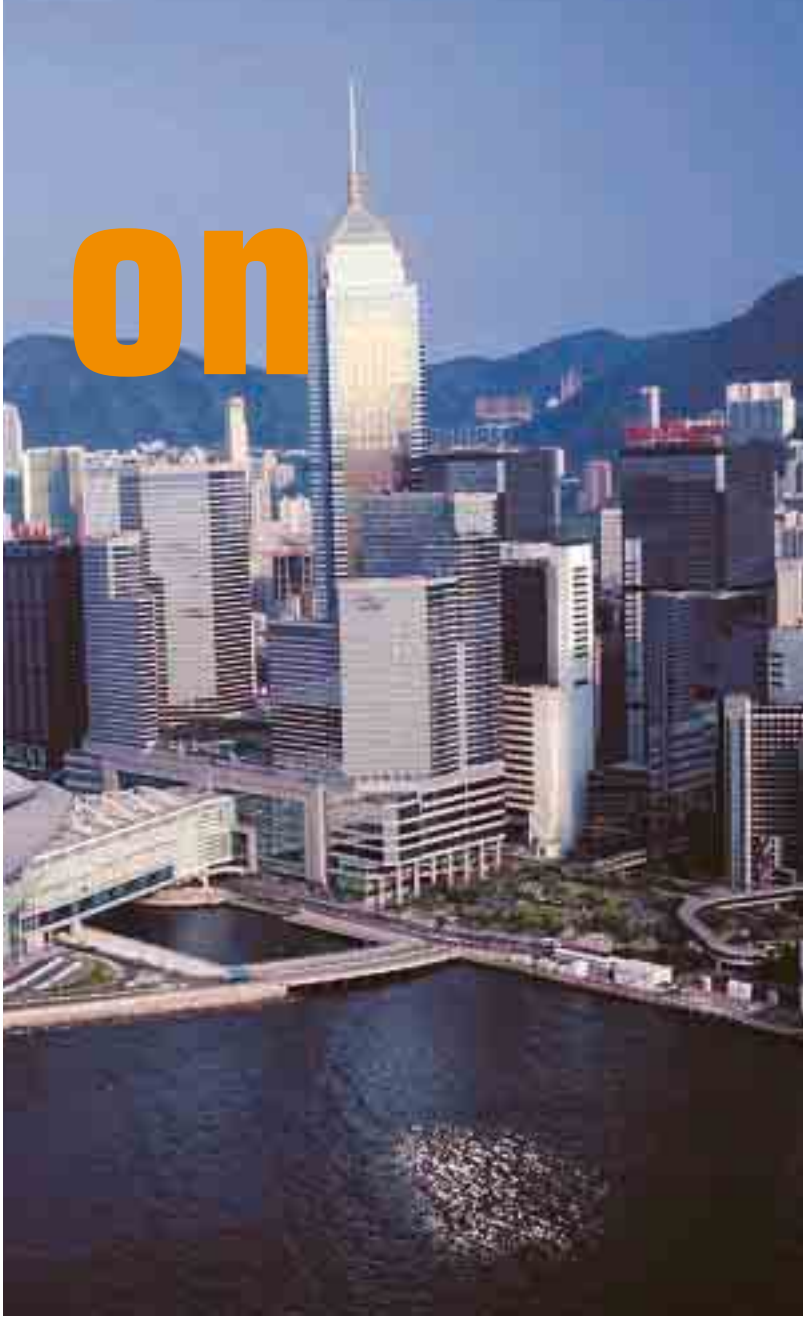
Avery Dennison has officially opened a new labelstock manufacturing facility in Guangzhou, capital of the southern Chinese province of Guangdong, in the latest phase of a strategic expansion of manufacturing and distribution in China.

The new plant is part of an investment program totalling more than US$40 million announced by the company in February 2000, which included three new manufacturing facilities and expansion of the existing Kunshan manufacturing plant.

Avery Dennison now has two coating and laminating plants in China strategically located at the centre of the country's two biggest concentrations of label converters. The first, established in Kunshan in 1994, services Shanghai and the booming Eastern provinces, while Guangzhou will provide enhanced service for customers in South China and Hong Kong, as well as expanded production capacity to meet the growing market demand for pressure sensitive labelstocks in South China. Avery Dennison also has sales and distribution centers located in Tianjin, Chengdu and Hong Kong.

The state-of-the-art Guangzhou plant represents an investment of $US30 million and is one of Avery Dennison's most technologically advanced global manufacturing facilities. Construction started in April 2001 and production started in June this year. The 35,000 sq metre site includes production area – housing the coater, three sheeters and six slitters - distribution center, and even a dormitory for employees. It has an annual production capacity of 150 million sq metres for both paper and film-based products and employs 96 people.

The plant is equipped with a 1.6 meter wide tandem coater, which silicone coats the release liner and applies adhesive/coating to the face material at the same time, so the laminate is constructed in one machine pass. This delivers clear benefits in terms of efficiency and productivity. Zemin



Gong, director of operations at the Guangzhou plant, points out that the coating line benefits from the latest line control technologies such as on-line coat weight measurement to ensure even caliper – 'so important to efficient dispensing on the application line and to correct die cutting.'

Dean Scarborough, president and chief operating officer at Avery Dennison Corporation, tells L&L that the key to the Chinese market is 'service time - being able to respond rapidly. The new plant is designed with this purpose in mind.'

As well as serving their own regional market sectors, both Avery Dennison manufacturing plants will also specialise in producing some label grades for the whole country. The Kunshan plant, for example, has particular expertise in films, while the tandem coating line at Guangzhou is well set up for the efficient manufacture of paper-based products. 'Price competitiveness is a key factor in the Chinese market, with intense competition from small local producers, who still supply ▶

> “Chinese domestic brands are starting to emulate the higher packaging standards of Western brands, moving up from paper to pressure sensitives and ultimately to film”

over half the pressure sensitive materials in this market,' points out Darren Milligan, marketing director at Avery Dennison Asia-Pacific. 'There is a vast "low end" sheet market that Avery Dennison does not participate in. But as the quality demanded by end users increases, the local producers will find it increasingly hard to remain competitive.'

The Chinese labels market

Avery Dennison's core materials business in China has grown by more than 35 per cent each year, exceeding the company's initial projections and making it the leading pressure-sensitive materials supplier in China today. These results were achieved despite the economic slowdown in China during 1998 and 1999.

China is now the company's largest market in Asia and is expected to keep growing at the same pace, if not faster.

Overall demand for pressure-sensitive materials is increasing in China due to the acceptance and use of self-adhesive labels on consumer products in a wide range of industries, including personal care, food, pharmaceutical and beverages. These consumer products markets are expanding rapidly in China.

Official government figures point to average year-on-year GDP growth rate of 8.3 per cent compared with a world rate of 3.8 per cent during the period of the current five-year plan, a growth rate sustained by China's entry into the World Trade Organisation (WTO), the rapid progress of market opening and ongoing development of western China.

Consumer product sectors have shown staggering growth. Year on year growth rates in the cosmetics industry are running at 16.6 per cent. This equates to RMB 350 billion in sales in 2000, a figure expected to keep growing at over 20 per cent a year.

An interesting labels-related 'side effect' of China entering the WTO will be a strengthened commitment to environmental protection and copyright protection. We can expect the requirements for 'green labels' and anti-counterfeit labels to increase dramatically.

The export sector provides immense opportunities for pressure sensitive labels, particularly in the VIP product identification sector. Total Chinese exports last year were worth US$124.57 billion - up by 8.8 per cent over the 2000 level - and technology and electronics products, one of the key growth areas identified by Avery Dennison, account for almost 14 per cent of this total.

Currently, Chinese converters overwhelmingly use paper label stocks - face and liner. In many state-owned enterprises paper labels are still applied by hand, a mode of labour-intensive operation which will surely become harder to sustain as the Chinese economy opens up to both external and internal competition. Avery Dennison has over 1,000 customers in China, representing a highly fragmented printing market where significant consolidation has yet to occur.

Use of film is increasing, however. In the reception area of Avery Dennison's new Guangzhou plant is an example of a multi-national shampoo brand using a clear front label and reverse-printed back label which uses a clear-on-clear construction fabricated completely in China. The future of clear-on-clear film in China undoubtedly lies in substitution of direct screen printed products in the health and beauty area.

In Mould Labelling is another product area seeing high growth. In China this is not simply a matter of enhancing the shelf appeal of a brand, but also for anti-counterfeit. Indeed, some multi-national brands are following IML strategies in China which they would regard as too expensive and inflexible in Europe and the US in an effort to protect their brands.

At the same time, Chinese domestic brands are starting to emulate the higher packaging standards of Western brands, moving up from paper to pressure sensitives and ultimately to film. This is driving the same trends seen in the West - shorter runs, a push to lower inventory costs and the ability to respond more quickly to changes in consumer tastes.

Electronics and product tracking/ID labels using thermal transfer and direct thermal papers are another key market for Avery Dennison, with key trends including the rapid takeup of home PCs in China and the development of sophisticated retail logistics systems.

A Chinese operation

David Xu, marketing director of Avery Dennison China Co Ltd, represents a new generation of Chinese business people. Xu emigrated to Melbourne, Australia, for his post-graduate college education, receiving an MBA in Business Studies. In this he is typical of the 'brain drain' now affecting China, with some estimates suggesting that well over half of all Chinese graduating abroad do not return.

But Xu also typifies another trend. With increased investment by multi-national groups like Avery Dennison in China, Chinese graduates with experience of Western business practices are in increasing demand, and are returning to the country. Understanding both Chinese business culture and Western management practices is a powerful combination.

Dean Scarborough proudly points out that 'the development of the Guangzhou plant and the training of the operatives was carried out entirely by Avery Dennison's Chinese personnel. Not only is our entire Chinese upper management team Chinese, but the training of the operators at the Guangzhou plant was carried out by plant operatives from Kunshan.'

In contrast, when the Kunshan operation was set up, the plant operators were sent to Avery Dennison plants in the US for training. Thus,for the first time, the Chinese operation of Avery Dennison can be regarded as a self-contained business entity which can draw on the Group's worldwide expertise.

Converting College

A key part of Avery Dennison's China strategy is its Kunshan Self Adhesive Label Converting College, which opened in February 2000 (see www.labelsandlabelling.com) and has now taken in its 400th graduate.

In general in Asia-Pacific - apart from a handful of top converters - the technical level of the label converting industry does not yet approach that found in the West.

So Avery Dennison is using its College to boost the technical level of the Chinese label converting industry. This is reflected in the three levels of training now being offered. At the top level, converters are making return visits to learn more specialised conversion techniques such as combination printing using Screen + (UV) flexo, or converting IMLs.

This in turn is starting to create a class of specialised label converters (most label converters in China are general commercial/packaging printers). The growth of a specialised label converting sector is reflected in the increased sales of rotary presses.

When Avery Dennison first moved into China in 1994 it surveyed the market and found just a handful of rotary presses. The vast majority of label printers employed flatbed or semi-rotary letterpress or sheetfed offset. Avery Dennison's latest research indicates that more than 125 full rotary machines are operating in the country.

Because so many Chinese converters still print letterpress, the Converting College has just installed a Labelmen PW 260 R6C 6-color UV rotary letterpress with UV flexo varnishing station and two unwind units. Toray supplied the plate processing line, which includes a Torelief UV letterpress printing plate system. Labelmen is also supplying a PWS-310 roll-to-roll 1-color silk screen printing machine with re-winder, sheeter and laminating module. The unit features both UV and infrared drying capacity.

Dieu Dai Huynh, group technical director for Avery Dennison Materials Asia-Pacific and college master, said 'Our students will be very pleased to have access to state-of-the-art UV letterpress print technology. Asia-Pacific region label printers recognise the importance of adapting to the latest printing technologies to compete in a global marketplace and grow their business.'■

Continued from page 23 ▶

'We have started with a few global brands' Niklas Olsson continues 'and initially we investigated the current status of their brand colours. Our conclusions are there are too many variations today. Now we are helping to provide better brand colour uniformity - from pressure-sensitive labels, via synthetic wrap-around to folding cartons'. An additional approach for brand owners looking to utilize special effect inks is also being developed by Akzo Nobel Inks. This includes metallic or hot foil effect inks, as well as effects that can be achieved with multi-colour combination process printing'.

If required, exclusivity of special effects for a specific brand or brand owner can be provided. Effect inks can be a simple and cost-effective way to reduce counterfeiting of branded products, and we treat special colours we know are for a particular brand with great care. It has happened that a converter has asked for formulation X, and a quick check with the brand owner proved that the converter was not approved. But in order to assist with this 'policing' we need to have good communication with brand owners'.

Other major innovations and developments by Akzo Nobel Inks for the brand owner market include improved flexo inks, low odour UV flexo, odour assessment testing, enhanced effects from combination process printing, and the latest developments in cold dieless foiling. 'The best part of this approach is really to discuss what's possible and not possible with the designers and brand owners. They have creative ideas and we can really help to reduce their cycle time from idea to launch when we get involved early in the design process. We can also help them to choose better solutions that can be printed repeatedly' Niklas concluded.

Challenges ahead

For Akzo Nobel Inks the challenges of this project have been to best determine how inks can add value to end users and print buyers – and particularly national and global brand owners. The requirements needed by brand owners looking for brand image, consistency of colour and performance, special effects and technical guidance and training are perhaps more complex than originally envisaged.

Now however, Akzo Nobel Inks has developed a package of solutions and products that should be of benefit to brand owners worldwide. Already working with a number of brand owners groups, the company is now looking to work with other key brand owners to further refine and develop this ink manufacturer/brand owner partnership approach.

Brand owners interested in this possibility should contact Niklas Olsson at Akzo Nobel Inks who will be pleased to talk or visit them to explore their requirements further. ■

■ Niklas Olsson can be contacted by e-mail at: niklas.olsson@tbg,aninks.com or by telephoning +46 410 593 02.

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Mr. Germano Baumgarten,
Baumgarten Label Division

A fourth M-3300 for Baumgarten

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Arconvert fills Quality niche

Vertical integration and concentration on niche markets is key to the strategy of Italian labels materials supplier Arconvert in a market increasingly dominated by global conglomerates. **Andy Thomas** reports from Arco, Italy

Can independent, medium-sized suppliers of paper and film label laminates perform successfully in a landscape increasingly dominated by giant global conglomerates? This question has been brought into sharp focus in Europe by the disintegration of the SJP group and the demise of Spectrum and Smith & McLaurin. All are now under new ownership, but it remains to be seen whether they can be turned around.

So why is the management of Italian company Arconvert so confident in its ability to compete in this land of giants - particularly after one of its main Italian competitors Adespan has been absorbed into the Avery Dennison/Fasson camp?

Sergio Tosolini, general manager of Arconvert's coating-laminating operation on the northern shore of Lake Garda in Italy, says the strategy has to be based around added value, not price: 'We're stepping away from the same commodity battlefield as Avery and Raflatac. We do not have the philosophy or the size to follow this route.

'We will not produce for stock but for direct orders,' says Tosolini. 'Our flexibility comes from modern on-line machines that enable us to produce the full range of products, and we can change production quickly. So we don't need stocks and can provide excellent customer service without the slogan "24 hours service", which often is not really needed.'

Arconvert's second response to the demands of an intensely competitive market is proactive problem solving: 'We must be able to solve the problems of our customers with tailor-made solutions,' says Tosolini. 'We constantly try to suggest the appropriate use of materials and promote the use of new materials or new applications. In the fast-moving pressure sensitive business there are always new surfaces to adhere to and new end users. The label printers need support in making suggestions to them.'

Vertical integration

To make this strategy work, Arconvert has exploited its vertical integration with the Fedrigoni Group, a €540M turnover, 1,950 employee operation encompassing the production of highly specialised papers and boards. Fedrigoni operates five mills which manufacture a wide range of uncoated and coated wood free products used extensively in graphics, publishing, stationery, premium packaging and technical-industrial applications. A recent acquisition is Fabriano, the former state-owned banknote paper producer which specialises in papers for security and financial applications.

Fedrigoni remains a family owned business with a history in the paper business stretching back to 1717. The first specialised paper mill was built in 1888 by Guiseppe Fedrigoni, and in 1965 Gianfranco Fedrigoni brought siliconised products to Europe after a visit to the United States. The self-adhesive division of the Fedrigoni group was started in 1989 with the founding of Arconvert, and expanded in 1993 by the acquisition of Spanish pressure sensitive materials converter Manter.

> “We’re stepping away from the same commodity battlefield as Avery and Raflatac”

Arconvert has doubled its turnover to €55M in the last 4-5 years, placing it among the top five suppliers to the labels industry in Europe. The turnover of pressure sensitive products inside the Fedrigoni Group now accounts for more than 20 per cent of total production.

Arconvert’s 45,000 sq metres factory houses four 160cm solventless coating lines used for the production of self-adhesive and release papers – both glassine and kraft. Film-based laminates are also produced, including polyesters, polypropylenes and vinyls. Capacity of Arconvert and Manter today stands at over 250 million square metres/year and as well as ISO 9001 and Vision 2000, the plant has recently been awarded ISO 14001 environmental management accreditation.

The four coating lines give the production flexibility which is key to Arconvert’s proposition, with the most recent installed ten months ago. One line is dedicated to special adhesive coatings such as striped adhesive application. Around 70 per cent of production is reels, against 30 per cent sheets.

Belonging to the Fedrigoni Group enables Arconvert to develop important synergies with its paper mills. The mill which produces glassine, kraft and coated paper grades, for example, sits just some metres far from Arconvert, and some 40 per cent of Arconvert’s raw material is sourced from Fedrigoni mills.

Another important Group synergy is provided by security paper specialist Fabriano, through which Arconvert is marketing its ‘Arcosecurity’ product line. This includes labels which incorporate security features hidden in the label, for example ink or fibres tuned to react to certain wavelengths or personalised laser-written holograms (these appear on the Euro banknote). In addition, invisible and overt security systems can be offered.

Fedrigoni’s experience in the high end sector – particularly in the fashion and designer goods sectors – has been successfully transferred to the wine and spirits label sector, where both Arconvert and especially Manter now have a strong presence on the market. Tosolini believes the southern European wine market remains wide open for pressure-sensitive label development, particularly France and Italy, where printers and end users retain the ‘traditional attitude and old equipment,’ which keeps wet glue predominant. Opportunities for pressure-sensitives in Eastern Europe will also explode after those countries join the EU in 2004, the company believes.

To take advantage of emerging global opportunities, Arconvert operates through its Brazilian subsidiary Arconvert Brasil in South America, while Manter runs a French subsidiary. Both companies have a global network of agencies. The two converting companies also take full advantage of Fedrigoni’s European fine paper distribution network, which includes wholly owned companies in the UK, Spain, France and Germany as well as 14 distribution centres in Italy. Around 90 per cent of Arconvert sheet products are distributed in Italy through the Fedrigoni network. 40 per cent of production is exported.■

Optimizing the anilox

David Watson, Southeast Graphic Consultant, Harper Corporation of America looks at how a banded roll trial can be used to optimize all components in the printing process

Running a banded roll trial can help identify the limitations of your equipment and optimize all components in your printing process. If well thought through, documented and analyzed, a banded roll trial can be extremely effective. In this article, we will explore the process leading up to a banded roll trial, the elements to include in the design of the artwork for the trial, and the analysis of each element.

What is a banded roll?

A banded roll is a single anilox roller that is engraved in sections with different line screens and volumes. This scientific method of process improvement allows multiple component testing to determine the thinnest ink films. A banded roll test can logically specify rolls for new presses or graphics improvement projects, and the results from the trial can also be an excellent educational tool.

Identify a clear objective

Prior to running a banded roll trial, it is important to ask yourself, "Why do I want to run a trial?" The most common reason for running a banded roll trial is to determine the thinnest ink film to run while still obtaining adequate solid ink density. However, there are other objectives. Maybe you are trying to improve graphic quality of print by optimizing all the components of the printing process. Proper line screen and volumes can be determined, along with the most effective sticky back for a particular job, the best substrate, plate, anilox, line screens, inks and printing plates. Identifying the reason for running a banded roll trial will determine the line screens and volumes that will be engraved on the anilox roll. If you are looking at solids and type or halftone screens and vignettes this needs to be identified in the preliminary meetings. Keep in mind, the more component/elements you include in the trial, the longer it will take to analyze the results.

Planning

In the initial stages of the banded roll trial, it is extremely important to meet with all the suppliers involved along with your internal team. Set up a meeting so everyone involved will know what the goal of the trial will be. The earlier you have involvement from your suppliers and internal team members, the greater chance you will optimize the time and data from the trial.

Allow adequate time on press for the trial. It is important to realize that running a banded roll trial will take time. Schedule for this. Do not expect to rush through this process and get usable data from the trial.

Run under production conditions. If this is not done, the data you get from the trial will not be valid. Make sure the press operators use the same impression settings, run speeds and other settings as they would during a normal production run.

It is very important to have the pressman and assistant involved in the planning process. A pressman can make or break a trial and not involving him is the best way for a trial to be a failure and time and money wasted.

What to include in the targets and how to analyze.

When designing the layout for the trial, it is important to include some key elements. We will now take a closer look at what needs to be included in the artwork and briefly discuss how to properly use each element.

Slur & Impression Targets:

These gauges are used to precisely set impression for anilox and plate. Paralleling of these settings is accomplished by comparing the targets on the left and right edges of the web.

At optimum anilox and print impression, the target should appear in a uniform color. If this result cannot be achieved, a slur condition (speed differential between substrate and plate surfaces) is indicated.

The targets are composed of parallel micro-lines. Their uneven growth in different segments will create lighter and darker visual effects to indicate improper settings.

Thick and Thin Rules

Thick and thin rules in positive and reverse are included in both the press and cross web directions. These lines are used to allow the designer to specify rule widths based on how they will appear when printed rather than as they may appear on screen. Lines in one direction may appear differently than lines in the other.

The positive and reverse lines are broken in the centers to observe the effects of gain. Ideally, the lines should appear of similar width when printed correctly.

Many times, designers may include hairlines in a ▶

design which will totally close up with press gain. This target is intended to prevent this occurrence. The lines in the digital target file are the following weights, starting from the center in points: 0.25, 0.50, 1.0, 1.5, 2.5, 3.5, .5. A microscope with measuring capability can be used to provide a measurement of line image gain.

Positive and Reverse Type

These elements are used to define the minimum positive and reverse type sizes which can be reproduced on your press. They also allow a designer to visualize the effect of size and weight on appearance and legibility.

These elements define the appearance of type combined with your process images. Much more gain in anticipated under conventional line work or solid printing set-ups. For these reasons, be cautious.

Grey Scales

Non- overprinting grey scales are used for all four process colors. The scale percentages start at 2% and go up to 5% in increments of 1%, then they increase by 10% increases up to a solid 100%. The scales will show how much dot gain is obtained during the printing process. They can also be used to check the print contrast.

UPC Symbols

UPC Symbols should be placed in both the machine and cross machine directions to determine optimum bar width reduction for symbols printed with the process color roll being characterized. This also shows how well UPC's will scan in the web direction and cross web direction.

Once all the images have been output to film and plates generated it is time to mount the plates using the most appropriate sticky back for the results needed. Consult with your sticky back supplier for recommendations.

Your ink supplier should have appropriate inks at correct specifications for the press trial. The pH and viscosity should be at optimum levels. To check these, use a pH meter and zahn cup or other viscosity-measuring device. Your ink supplier will know what is best for this.

The day of the banded roll trial, all members of the team should be in attendance to handle any issue that may arise during the trial. They will also be able to give advice and assist in the analysis process of the printed samples.

Evaluation of Samples

Once the samples are printed, it is important to evaluate and react on the data generated. All of the suppliers can assist in the evaluation of the data so the most accurate information can be passed to the pre-press department or your separator.

Remember, a banded roll trial can be a very effective tool for determining the thinnest ink film while maintaining enough density. This scientific test can also be used to test sticky back, plate material, substrates, anilox and inks. All the variables can be optimized for the best quality. Keep in mind, if any of the variables change over time, another banded roll test will need to be run. All the data generated will no longer be valid. ■

● *David Watson joined Harper Corporation of America in 2001, and is the Southeast Graphic Consultant for the company. Formerly a Technical Branch Manager for Environmental Inks and Coatings in Worcester, MA, David received his Masters degree in Graphic Communications from Clemson University.*

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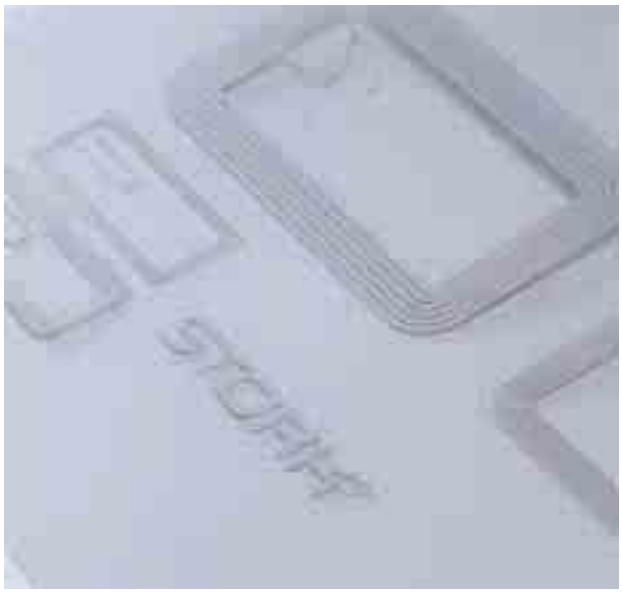
Screen print targets

Combination printing with rotary screen units has become increasingly common amongst narrow web printers. But Stork Prints, which helped pioneer the technology for rotary machines, is now pushing the technology into new areas, as **Andy Thomas** reports



Screen printing antennae onto RFID labels

Rotary screen printing in combination with flexo, offset, letterpress – or even gravure - offers narrow web printers many unique advantages. It can print coatings up to 300μm, is useable with almost all ink-types including those with large particles and is compatible with all plastic and paper label substrates. This makes screen printing an ideal choice for a host of high-end product decoration and identification label applications.

Stork Screens, now part of the Stork Prints group, of Boxmeer, in the Netherlands, pioneered rotary screen printing techniques in 1963 for the textile industry and transferred it to the narrow web industry as far back as 1988. Rotary screen was given a huge boost in the mid-90s with the development of thin clear-on-clear PE films giving the 'no-label' look, and today rotary screen is a central fixture of the printing press mix at most converters.

But now Stork is keen to push narrow web converters towards more innovative decorative and industrial print techniques made possible by a new generation of hot air drying units launched at Labelexpo Americas. These modular systems are designed to be used alongside existing rotary screen printing modules and open up a whole range of possibilities.

Metallics

Screen printing allows the waste-free application of silver and gold inks, as an alternative to hot and cold foiling. Using screen printing you only use what you print, making it more cost-effective to use rotary screen printing in a number of high-end application areas where hotfoil is usually used – or even where hot foiling could not up to now be considered. The 'mirror effect' is achieved using solvent-based ink, the chemical structure of which enables the necessary brilliance to be achieved.

The negative is reverse printed, since chemicals that create the shiny look concentrate nearest to the substrate. This effect is best achieved with the Rotamesh 215, with a 25 per cent open area.

RFID

Another interesting application area is printing antennae onto RFID labels. As L&L readers will be aware, Radio frequency identification (RFID) systems or 'smart labels' are a rapidly growing market, with paper-thin smart label tags the main drivers of the market's future growth. But the cost per RFID label must be reduced before we can see a true explosion in usage, and one area this can be achieved is replacing the etched copper antennae with a printed antennae. The problem up to now has been the very small 'read-write' distances which can be achieved by printed inks.

Now, Stork has conducted trials with a special solvent-based silver ink which, the company says, offers much greater con-

new areas

Thermochromic inks layed down by Screen

ductivity. This in turn means that the label's antennae require much lower resistance, so that less ink is needed. Stork says this offers great opportunity for the development of the paper-based RFID labels market where a high-cost solution is not practicable - such as where the tag is disposable or sold with the product, or where smaller runs are required. Applications include:

- Remote identification
- Automated counterfeit detection at a distance
- Remote detection of tampering or movement of a specific film
- Carrying updateable data on product status on or in the product. Security clearance of products in an airport environment is a particularly interesting application
- Logistics, such as the automated tracking of products, often many at a time. A multiple retailer may use it in its warehousing hubs, for example
- Tagging of people such as hospital patients and prison inmates

Electro Luminescent Applications

Rotary screen printing is also ideally suited for electro luminescent (EL) end-uses. An EL lamp is a layered structure with a phosphor sandwiched between a back electrode and a transparent front electrode.

An AC voltage across the electrodes generates a changing electric field within the phosphor, which causes the phosphors, typically powders of zinc sulphide, to emit light of specific wavelength or colour. They offer significant advantages over point light sources. They generate no heat, consume 75-90% less power, provide even lighting and – of course, from the narrow-web converter's point of view - are no thicker than a layer of ink.

In collaboration with a major ink manufacturer, Stork Prints has developed a screen-printed capacitor. This is an ultra-thin lamp, with highly conductive silver ink. It has a transformer that operates at 110v, at a frequency between 300 and 400 Hz. EL lamps can be used for a variety of applications, including emergency lighting in buildings or aeroplanes, dashboards in the automotive industry, toys and promotional items.

Security

Security inks are notoriously expensive. They offer high performance, but wasteage costs dearly. A leading ink manufacturer recently launched a water-based liquid crystal ink that has a very strong colour-change effect. Its extreme colour-changing properties make it an ideal authenticity provider, for products such as cameras and 'brown goods'. Getting the deposit level spot-on is vital.

Too little results in transparency and loss of functionality. And going too thick incurs astronomical costs. The ink is best printed at a thickness of 20μm at speeds of 100 m / minute. Drying is easily achieved with Stork's hot air drying system.

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Ultra thin 'lamps' can be screen printed

Thermochromic

Thermo chromic inks that change colour in response to temperature change are rapidly becoming functional parts of manufactured industrial products in product labelling, the medical field, and security applications.

The colour-changing property of the thermochromic ink is formed the addition of leucodyes, that have chemicals that form microcapsules round the inks. Between 3 and 5μm, these microcapsules are ten times the size that makes up average ink particles. The heavier ink laydown needed to protect the microcapsules makes rotary screen the most effective printing method, according to Stork. The mesh count required depends on the opaquness and particle size.

After they are printed, these inks function, or continue to change colour, for years. The temperature range to achieve this colour change is from 0 to100°C. The obtained colour change can be both reversible and irreversible. The post-print functionality can, however, be adversely affected by UV light, temperatures in excess of 121°C (250°F), and aggressive solvents.

Interesting label uses of this type of ink include:

- Indication that white wine is at the correct temperature to be served;
- Sterilisation of medical implements, where the colour change is activated after temperature has been reached for a specific period.

The choice of screen for thermochromic ink depends greatly on the necessary layer of ink, and the particle size of the ink. For instance, coarse particles would best require an RM 75 / 40%.

Screen test

Stork has today become a total systems supplier of screens, pre-press units, integrated screen units and rail units which allow label printers to place the screen unit at any position on the press. A printer can thus easily move from one job where an opaque white is required are performed in the first pass, to a metallic application which would occur in the final position.

Stork's latest RotaMesh screens are stable enough to run at speeds of up to 125 metres per minute and be re-engraved up to 15 times. The type of screen you use depends on the application. Generally speaking, the higher the mesh count, the finer you can print. The RotaMesh 405 screen enables printing down to 2-point, with line-widths of just 70μm, which makes it a viable option for printing text on household products, where numerous ingredients have to be identified in different languages – including oriental calligraphy.

Medium meshes are used for bold text and line work, whilst low mesh-counts are the means of achieving the high deposits, between 250 and 300μm.

Examples of this include Braille, glow-in-the-dark and phosphorescent.

The box room goes backstage

Esko-Graphics' digital workflow solution for packaging becomes essential tool in Box Room production cycle

Box Room using Backstage digital workflow

A UK packaging-labels design and repro house has just completed a successful trial of BackStage, Esko-Graphics' digital workflow solution for the packaging industry.

Last year The Box Room came back into private ownership again, having been sold to the Fulmar Group in 1996. Since its inception ten years ago, the Tamworth-based company has specialised in providing artwork, repro and project management services to the packaging industry, counting amongst its customers major international food, drink and industrial manufacturers.

Unlike many other packaging repro specialists, which bring in digital files from outside agencies, The Box Room handles all the artwork in-house, taking jobs from concept and working them up into a number of different packaging requirements.

For many years The Box Room was one of the largest UK users of Contex with five seats. More recently they have been totally Mac-based using standard desktop software packages like Illustrator, Freehand and Photoshop. 'In every repro process there are several essential tasks that have to be done, like trapping and step and repeat, that don't really add value to the business,' says Neil Gleghorn, md 'BackStage can take these, what we call 'grunge' jobs, and process them automatically in background, releasing valuable operator time.'

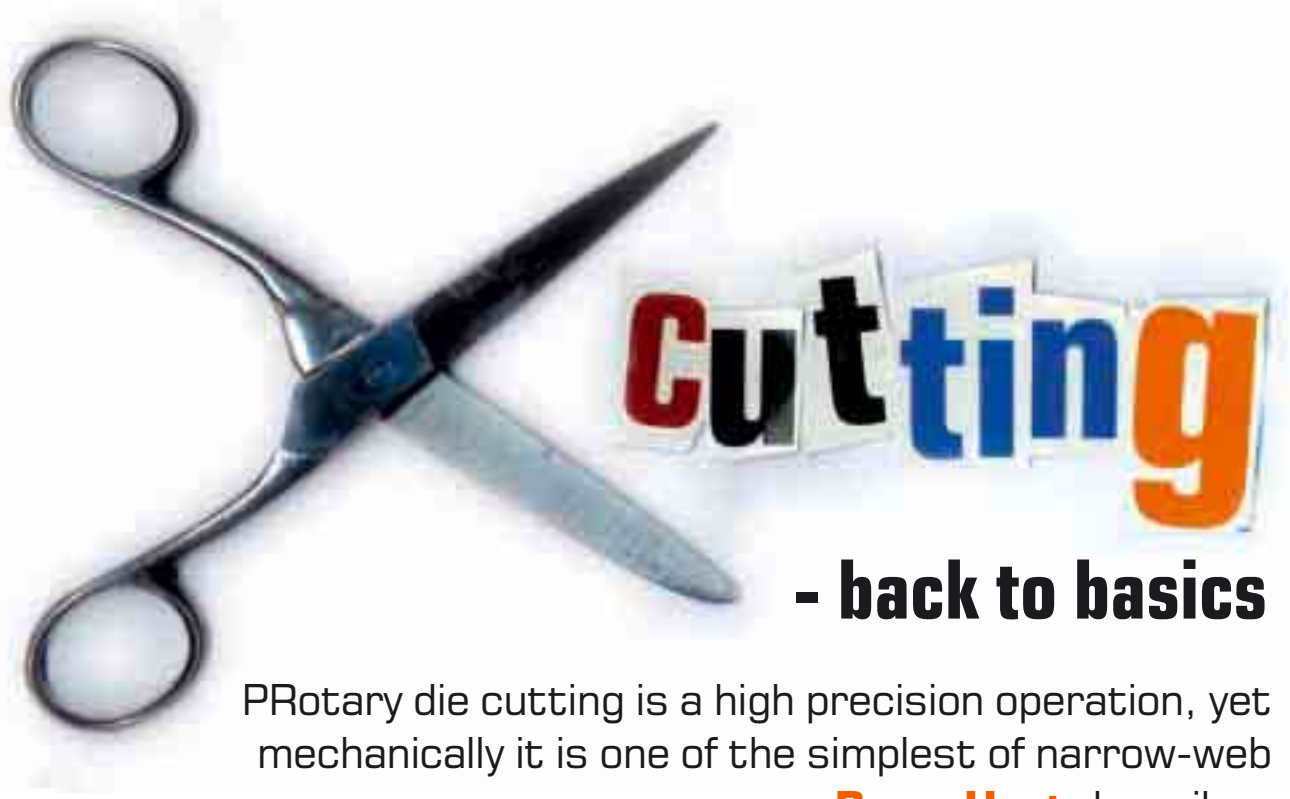
Both PackEdge and BackStage are under the supervision of Brian Mallon, who has a lot of previous experience with Barco systems. Digital files come into the PackEdge workstation from the Macs and then into BackStage where job tickets and folders are created. BackStage is configured on a Compaq server with twin processors.

In peak periods, BackStage can run 24 hours a day without an operator. Brian Mallon sets up a queue of jobs to be processed overnight and dials into the system from his home to check on progress. 'Previously some of the file preparation and conversions were a nightmare to do on the Macs using Illustrator,' Neil maintained. 'This is where BackStage can save us an enormous amount of time. As an example, I can cite a job which took us two days to do on a Mac and which BackStage can do in two hours. That's an exception but I can conservatively say that we are enjoying a time saving of at least 50 per cent on our previous system.'

Recently Mallon had an urgent repro job. 34 sample packs had to be prepared and ready for an overseas client. 'I came in on Saturday morning at 9am and had the CD ready for the courier to collect by noon, which would have been impossible without the automation facilities of BackStage,' he commented.

'There are, of course, some very difficult trapping jobs, which BackStage can do, but may still require some human intervention. However, we know that Esko-Graphics is continually updating the software with new and more sophisticated features and are confident that operator intervention will become even less in the future.'

Gleghorn summarised. 'BackStage is saving a lot of time as well as improving consistency, traceability and storage. We're also liaising closely with the developers at Esko-Graphics in Gent as both parties want to maximise this investment and some of our suggestions are being incorporated in the next version of the software, due out at the beginning of next year.' ■



Cutting - back to basics

PRotary die cutting is a high precision operation, yet mechanically it is one of the simplest of narrow-web processes, as **Barry Hunt** describes

While there is still a lot of flat-bed die cutting around, the majority of label shapes are formed using rotary tooling. The cutting edge profiles are either engraved from a solid cylinder, or from a flexible die plate. These are wrapped around a magnetised stainless-steel cylinder, which holds them securely in place. Die cutting cylinder ends are fitted with gears and hardened bearers, which act against a geared anvil roller assembly. As the web passes through both sets of synchronously revolving cylinders at a constant speed, there should be just sufficient pressure on the cutting edge profile for it to cut through the laminate's surface substrate and the adhesive, but not cut through the release liner, or so-called 'kiss cutting'.

On the press, the unwanted label stock material, or matrix, is stripped away for rewinding, or removal by an air-assisted system, to leave the web of finished labels ready for rewinding. Die cutting is therefore a post print operation involving one or more modules, but for some operations the process of die cutting and removing waste becomes part of the final slitting and inspection of printed labels.

An alternative to kiss cutting is to cut through the top layer and adhesive and leave the surrounding material on the release liner, as with manually applied data labels, baggage labels and the like. It is also a common practice for other narrow-web applications involving cut-outs, such as integrated label or card products, form/label combinations, envelope patches and direct mailer pieces.

During manufacturing, the cutting edge profiles of the dies can be formed with chemical etching, sharpening with advanced CNC milling machines and edge polishing. Most manufacturers offer different ranges with various hardening treatments that are intended to prolong the life of cutting edges. Profiles come in various cutting angles and depths to match the individual characteristics of the label laminate, including the caliper of the release liner. By the same token, a different type of metal-to-metal tooling is manufactured to match the characteristics of other substrates, such as unsupported film and thin board to obtain clean, trouble-free cuts.

This interaction between the cutting tool and substrate is taken seriously by paper and film makers, especially when lower grammages are involved. 'As label materials are getting thinner and thinner, and increasingly made of synthetic films, the dies have become sharper and they apply more pressure, therefore the calibration accuracy is crucial', says Marco Martinez, self-adhesive marketing manager for Ahsltrom. 'The liner thickness must match the agreed specification very closely, otherwise the die will cut through the liner or cause an incomplete cut of the labels. As a manufacture of label papers, we must know in depth all the converting steps these materials will go through, which is why we have set up pilot coating centres.'

In terms of availability, European label converters have a wide choice of competitive suppliers of both rotary and flatbed systems, with associated cylinders and tooling. The more familiar names include Electro Optic, Fine Cut International, Gerhardt International, Holfeld Tool and Die, Kocher & Beck, RotoMetrics, RotoTechnix, Schober, Tools & Production, Spilker, Xynatech and Wink. In certain cases they also make precision tooling for edge trimming, creasing, linear or cross perforating, folding, sprocket or file-hole punching and embossing. Applications can include ▶

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in-mould labels, napkins, coasters, airline tickets, boarding passes, wallets, event tickets and much else using produced on in-line and/or off-line web processing equipment.

Solid die cylinders are usually specified for applications with standardised formats that produced in high volumes and/or frequent batches. Even the sharpest of dies will eventually become dull, some might exhibit broken edges, but users can return them to the manufacturer – after ensuring they are properly protected and packed – to have the cutting edges resharpened. This type of retooling can greatly extend the life of what is after all an expensive piece of kit. In respect of the gradual wearing of dies, manufacturers warn against situations where an operator may be tempted to apply more pressure on the cylinders to increase the 'bite' into the substrate. It is not recommended because any extra force on the cylinders not only effects registration, it could easily result in damaged bearings, gears and the die itself.

Flexible dies

Flexible die plates have long been accepted as being both a practical and lower-cost alternative to solid dies. Available in various gauges, they now make up the majority of output for most die manufacturers. Die plates are made from hardened and tempered spring steel. Their gauges can typically extend from 0.40mm to 0.76mm for cutting materials ranging from film to carton board, and double layer tapes. Besides shorter manufacturing lead times, individual plates weigh only a few grammes. That makes them easy to despatch anywhere in the world using mail or courier services, as well as store after use. Furthermore, there are few limitations on the complexity of shapes, either kiss cutting or metal-to-metal cuts for non-label applications. The origination process resembles that of platemaking. Improved edge hardening methods now allow almost unrestricted cutting of paper and film laminates.

The initial attraction of these dies was almost entirely related to price. They were obviously far cheaper then solid dies for jobs involving short runs. This argument still stands, but modern manufacturing techniques have pushed the boundaries further. Premium-grade flexible dies are available for far longer runs. They are also suitable for cutting such hard-surfaced materials as polyethylene or aluminium foils, which will wear the die more quickly than paper. This may involve a separate laser hardening process to produce a uniform and extremely hard tip to the CNC-engraved cutting edge. An example is the MultiCut TPD Gold, which also has a surface coating that interacts with the laser-hardened cutting edge. Gerhardt uses a method of back grinding, which is said to produce a tolerance of 3 micron. The resulting MultiCut technology is said to cut any label stock providing the liner has a uniform caliper and quality.

Last year Spilker installed a laser-hardening plant to compliment a new CNC milling centre for producing flexible dies. According to Andreas Spilker on the company's web site, the process almost doubles life of the die to offer a much higher cost-benefit effect compared to conventional flexible dies: 'The new dies cost 30 per cent more, which results in total cost savings of 35 per cent (in case of optimum conditions) because until now the customer would need two flexible dies for a certain quantity of labels. Based on an assumed unit price of ¤230, the sum invested would have been ¤460. Today one single laser-hardened flexible die costing ¤300 will be sufficient, so the customer saves ¤160. The label printing market is characterised by strong competition and keenly calculated prices, so such a price difference can be the decisive factor for the placing of a substantial order.'

The wide range of self-adhesives substrates available for numerous label products, including thinner films, may introduce problems with conventional fixed gap cutting systems, but systems with adjustable anvils offer a solution. An established example is Kocher & Beck's GapMaster, which uses both solid dies or magnetic cylinders. The design of the bearer rings on its anvil roller allows users to adjust the air gap between the cutter and anvil while maintaining a constant cutting pressure throughout the production run. Manual adjustments are made in steps of 0.8 micron to a maximum of +/- 0.1mm, even when the running, to make allowances for different substrate thicknesses and compensate for wear on the die.

Carton production

Producing short runs of small folding carton blanks on web-fed presses represents another facet of rotary die cutting, along with front or reverse-side creasing and foil embossing. Modern die making techniques allow rotary cutting to compete effectively with the alternative method of using flat-bed dies, where the web is fed intermittently using an independent drive. Besides issues concerning run lengths, there are other pros and cons. For example, some say the rotary method is more flexible in handling various qualities of board, including recycled grades, while its contin-

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uous feeding causes fewer registration problems.

Normally the cutting and creasing modules use solid male and female steel tooling. Some systems combine both these functions in a single cylinder, which eliminates register problems. As with labels, flexible dies mounted on magnetic cylinders are now more widely used, especially if they have been laser-hardened and have the right profile for cutting thin board. A single die will remain sufficiently sharp to process from 30-50,000 cartons.

The Boxit system from Spilker uses synchronously running pairs of male/female cylinders that are said to guarantee exact cutting and creasing combined with short set-up times. It is available with either hardened solid rotary cutters or pairs of magnetic cylinders with exchangeable flexible dies, or as a combination of both techniques. Any form or size of waste from cut-out boxes is picked up at the delivery end using special needles and removed by vacuum. Gerhardt International's MultiLine BoxCut is a dedicated flexible carton cutting and creasing system. The hardened steel die is CNC-engraved with a polished cutting edge and mounted on a conventional magnetic cylinder. The actual creasing profile comprises three closely-aligned ribs, which makes the point of fold more precise and stronger because the carton fibres are not overstretched. The die plate is said to work best when cutting and creasing on the reverse-side of the carton board. This prolongs die life and does not deface the printed and varnished top surface. By slightly offsetting the cutting and creasing shape at a slight angle users can achieve a cleaner, shear-cut effect.

Depending on production volumes, regular reel-to-sheet carton producers may use reel-fed off-line units, which can also offer more varied output. For example, Schober's PBO line (which can also run in-line with certain narrow-webs) produces hinged lid and outer boxes for tobacco packaging, small folding boxes for pharmaceutical and health care products, lids, trays and similar items. In stand-alone mode a typical configuration includes unwind, in-feed nip station, servo line shaft drive, electronic registration, die cutting and punching cassettes, and hologram or hot foil applicator. Delivery is in batches or continuously in upright position or shingled. Maximum web width is 660mm and top mechanical speed is 250 m/min.

At the cutting edge?

Laser die cutting for labels and small-format cartons has been around since the early 1990s as a development from proven industrial applications. Based on CO2 laser beam technology, it is associated more with digital colour printing, because the elimination of mechanical rotary cutters, or steel rule flatbed dies means it affectively closes the digital loop (although it can augment conventional label printing methods).

One of its main features is an ability to cut or micro-perforate shapes of unlimited complexity on paper, film or any non-metallic substrate at high speed. The operator can quickly alter the shapes and sizes with a few moves of the mouse at the PC control. Similarly, kiss-cut or cut-through depths are easily set and adjusted – and stored for repeat jobs – without the need to worry about substrate-specific cutting bevels.

Despite these benefits, the various in-line or stand-alone offerings seen so far have not gone beyond beta-testing environments. Higher hopes are expected of two current examples, which were publicly demonstrated at Labelexpo shows in Brussels and Chicago. Mark Andy ran a laser die cutter module from LasX Industries Inc of White Bear Lake, Minnesota, on a Model 2200 flexo press together with a Dotrix digital ink jet module at the last Chicago show. A year earlier, Cartes Equipment in Italy unveiled its stand alone Laser 350, shown running with a Xeikon-engined MAN Roland DicoPack and it has since been coupled with web-fed HP Indigo presses. Cartes offers two commercially-available models: the 350/100 and 350/200. They have a maximum web width of 350mm and are differentiated by adjustable laser beam powers of 100W and 200w, allowing variable cutting speeds of up to 200 m/minute and 400 m/minute (or an impressive 6.66 m/second) respectively.

Overall, laser die cutting technology seems far in advance of market demand and presents few threats to the mechanical die cutting world. It still awaits a marked increase in the use of digital colour printing, which may happen within the next five years. ■

> "As with labels, flexible dies mounted on magnetic cylinders are now more widely used"

Re-thinking your business

Part II of the keynote presentation given by **Chistian Simcic**, group VP, Avery Dennison Materials Worldwide, at Labelexpo Chicago looks at Avery Dennison's experience of managing change and the benefits the process can bring to any converting operation

Avery Dennison started the process of 'outside-in thinking' just a little over two years ago, when they decided to transform themselves into a higher-growth company. Where was that growth going to come from? How could they do more than what they were already doing?

The problem was, Avery Dennison were looking at their business from the inside out. Looking at what they were making and trying to figure out how they could sell more of it. Their fundamental focus was on gaining market share, rather than looking for ways to expand demand.

To help the company learn to think expansively, they worked with world-famous business consultant Ram Charan, who showed them how to view their business from the 'outside in,' and 'enlarge the pond'. Armed with an expanded view of market potential, the company questioned whether their definition of markets was broad enough. They began to imagine what it would be like to find some huge opportunities with expanded market definitions. They began to think seriously about selling existing products and services into new markets and channels and new products into existing markets. Everyone should be encouraged to read Ram Charan's book, 'Every Business is a Growth Business'. It helped Avery Dennison to focus on five key elements - and it may be helpful to your business as well. Here's a quick overview of what we learned:

1. Refocus on your customer's needs. Again, think outside in. Define the needs of customers and then configure products and services around those needs. How many readers consider themselves as sales people? Is asking, "Can I quote on the label" real salesmanship? A better question would be – "what's the application?"

2. Observe the real needs of your customers – filter-free.

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> "Already," he said "some 95% of large European firms are doing or planning to do e-business – with 42% currently billion of world wide trade. doing or planning to do e-business – with 42% currently billion of world wide trade"

Are you making the sales calls? Avery Dennison's top management team just returned from seven weeks on a world wide tour, where they met with many customers. They wanted to share with them the benefits that the post acquisition structure would provide, but more importantly we needed to better understand their un-met needs. And it was a real eye opener.

3. Define operating mechanisms in your business for growth. How much time are you spending identifying and acting upon areas of potential new growth? For example, are your compensation and incentive systems motivating your people to drive new growth?

4. Devote ample resources – time, money, people and alliances - to help drive your growth. And don't forget to use your suppliers.

And five, - lastly and most importantly, as a leader of a business, focus your energy and attention on areas of growth.

Does this all sound familiar? Of course it does. It's how we built this industry in the first place. The key point is that the answers lie outside the four walls of your company. New technologies and new materials aren't relevant if you can't provide a customer solution.

Remember the basics, and where we started. This industry has grown thanks to the expertise and the quality work that converters have delivered - combined with an outstanding sense of service. Continue to capitalize on these strengths.

You know more about graphic art and label possibilities than anybody else. You are the experts. Make this expertise accessible to your customers, listen to their needs and be their packaging partner.

Think about how you are interacting with customers to provide maximum value. Here is an example on how Avery Dennison is trying to change its approach. Their teams from R&D product development and marketing regularly hold 'innovation days', during which they meet directly with their customers and their customers.

The purpose of the meetings is two fold. First and foremost is to listen – to let customers tell them their product and service problems and what they really wish for.

The second purpose is to display Avery Dennison capabilities and technologies – not just the ones that customers would normally expect from them. At first glance, capabilities and technologies may seem to have no connection to their immediate needs, but they do stimulate ideas and lots of 'what if' discussions.

Innovation days are always eye-opening, learning experiences for both their customers, and for them. If you can create products that meet customer real needs, those products will be successful.

Oh, by the way. There is one more thing Ram taught Avery Dennison. In order to fund growth, you have to drive productivity even faster! Growth strategies go hand in hand with an aggressive, relentless focus on increased productivity, quality improvement and cost reduction.

So Avery Dennison have had to accelerate their productivity processes – not only to continue to grow profitably in a tougher environment, but to fund important growth initiatives. Their approach has been to use tools like six sigma - which is highly recommended for dramatic productivity improvements.

Avery Dennison has been able not only to save money on a direct cost basis, but take millions out of their working capital. Those of you who have a lot of cash tied up in inventory need to be thinking about ways to improve cycle times and liberate some of that cash for investment into growth.

Ram also taught Avery Dennison about the need to expand its pond.

'Expanding the pond' can mean expanding beyond self-adhesive, beyond the way you're doing things today, beyond borders and beyond current relationships.

To expand your ponds, think of yourself as a packaging, decorating or service provider to your customers. Avery Dennison believes converters can help customers create value in only two ways. First, is to help them expand their revenue. In other words, sell more. The second is to help them save money or cut their costs. If you are simply calling on the purchasing manager at a customer, then it is guaranteed all you will be doing is focusing on cost cutting.

Avery Dennison expanded its product line to include non self-adhesive materials because they found customers wanted fast, reliable delivery for new applications – so they could grow.

Certainly, at Avery Dennison, we put considerable innovation, research and development capability out in the market place and in front of customers and end users to solve application problems. Many converters, however, are reluctant to use their suppliers to help grow their business. Converters need to be challenged to think differently – and to think creatively about ways to harvest the vast technology resources that are available from industry suppliers.

Expanding the pond can also mean extending the reach beyond your national borders. As mentioned before (see Labels & Labeling Oct/Nov p.40), think about the 'low hanging fruits' of growth outside the U.S.

Think about your back yard, Mexico, where more and more customers are moving. Think about Europe where converters are forced to move outside their domestic boundaries now.

> "Already," he said "some 95% of large European firms are doing or planning to do e-business – with 42% currently billion of world wide trade. doing or planning to do e-business – with 42% currently billion of world wide trade"

And why not think of Asia, where two thirds of the world's population lives.

While you may not feel equipped to meet this challenge – remember you are not alone. Take advantage of your suppliers' expertise and experiences.

Which leads to one final point – what should you expect from your suppliers?

Suppliers must be able to do two very basic things for converters - help them grow, and save them money. It is much more difficult to realize the full potential of a company if you rely only on its own resources and expertise.

Today it is possible to apply these learnings at Avery Dennison. We are tapping into the resources of our suppliers. We are capturing our knowledge by relying on their research and development more than ever to trigger new ideas and create new products. We have started vendor managed inventory programs with some suppliers, allowing them to reduce their working capital cost.

Long-term success comes through the outstanding execution of a strategy and therefore requires a pool of talented people. Attracting and retaining talent is a challenge that we all have in common. This is another example of experience-sharing that suppliers can, and should offer you. Use them as an extension of your own resources and expertise.

As already stated the self-adhesive industry is a terrific industry to be in. It has grown phenomenally in 65 years and has made the lives of many generations of families very comfortable because of the relentless drive to solve one labeling challenge after another, after another.

Because of this industry's creativity and entrepreneurial spirit, it should have a tremendous confidence in its own future. Let's build that future together. ■

Containers: a route map

Packaging in cups and tubes - yoghurt pots, margarine tubs - is a booming sector. **Chris Williams FIOP** reports on a seminar which examined alternative decoration routes from direct printing to pressure sensitive and in-mold labels

Zeller & Gmelin and sister company Intercolor, are in a unique position to examine alternative routes to decorating cups and tubes: they are leading ink suppliers to both dry offset and labels printers. A recent seminar in Frankfurt, Germany, examined the technology of plastics decoration and attracted 255 delegates from 24 countries.

The opening address was by Alex Stevenson, managing director of Z+G's worldwide printing ink interests, who explained that practically 100 per cent of the ink supplied by the company for container decoration is now UV cured, while ink dispensing systems and 'blind colour matching' are now important concepts for converters.

He continued by speculating on the future of the different container decoration processes, the introduction of smart labels and RFID, and the growth of use of metallic and fluorescent inks on containers.

Christina Stury, packaging engineer of leading European dairy products company Danone, explained the company's reasons for choosing dry offset printing as the primary process. These included high output, acceptable cost, suitable quality and choice of potential suppliers. Availability of varying cup designs, sizes, shapes and materials and the ability to run up to 10 colours in both line and half tone images. Above all, Danone require clean consistent colours, good quality cup manufacture, clean sharp printing and total freedom of contamination of the inside of the cup by ink.

Danone use Paris based Team Créatif design agency from which Cherie Bodie and Aude Giabicani talked of the essential steps in the creative process. The elements of packaging design were illustrated by such world wide brands as Coca-Cola, Nivea, Nike, M&M's and Taillefine.

The view was expressed that dry offset was the most difficult printing process for the designer. Overlap or mixing of colours must be avoided, vignetting is difficult, and text sizes and reverse text are limited. Particular care needs to be taken when designs originally produced for gravure are being converted for dry offset when the design must be simplified but co-ordination with packaging produced by other processes must maintained.

As an objective of the conference was to compare the different methods of decorating plastic containers, the use of self adhesive labels was discussed by Christian Ritter of Schäfer-Etiketten. As most plastic containers are conical, the application of labels presents a variety of problems if square application without creasing is to be achieved;

- Two separate short labels may be used.
- Complete perimeter labels may need to overlap.
- Badly stacking containers (eg with a contra-conical foot) are difficult to handle
- Extremely thin walled containers may be relying on the label for stability
- The positioning of the label must be accurate and repeatable.

> "Dry offset is the most difficult printing process for the designer"
>
> **Christina Stury, packaging engineer, Danone**

The alternative approach offered by Schäfer-Etiketten is said to overcome the problems:

- The label is transferred from the backing to a conical vacuum drum with the printed side in contact with the drum
- The plastic container is placed on a suitable mandrel
- The label is transferred from the drum to the container

The alternative labelling approach of in-mould labelling was advocated by Thorston Rulkötter of Rahning. As the label foil may be pre-printed by gravure, flexo or offset litho, substantially higher quality with fine line and photographic quality can be achieved. This permits screen resolutions as follows;

- Gravure: 80 l/cm
- UV sheet offset: 60 l/cm
- UV rotary offset: 60 l/cm
- Flexo: 42 – 48 l/cm

All of which are finer resolution than dry offset direct printing. Printing of the entire outer surface (including the bottom) is possible, a 'no-label' look is provided and the label becomes integral with the body of the container.

Other advantages include lower stock holding, rapid design changes, and improved recycling, although higher cost has to be acknowledged.

Whether direct printed or labelling, suitable inks are still required and Hans-Ulrich Linder of Zeller+Gmelin outlined new products recently introduced and reported some application research that has been undertaken. The new products included a black, opaque and transparent whites, Hexachrome colours and a range of Uvalux lacquers.

The research undertaken investigated the influence of film thickness on the through-curing of UV inks and the levels of dot gain that may be encountered with different plate types, plate processing techniques and containers sizes/types. Evaluation of dot gain is assisted by a new print control forme, in single colour or four colour, developed by Z+G.

The future of plastic tubes was considered by Kurt Roesch of leading tube printing machine manufacturer Polytype. Both laminate and plastic tubes are displacing aluminium with monolayer plastic growing faster. It was questioned why the images used on tubes were much simpler than those on cups when the achievable print quality is the same.

Dr Heinz Schweiger, technical director of Z+G reviewed the new Trouble Shooting Guide introduced by Z+G. Having first concluded that the world is shaped like a cup (!), Dr Schweiger considered some of the difficulties that are encountered when something goes wrong in the print shop. The Trouble Shooting Guide content was explained and the plan to put the guide on Z+G's web site was announced.

The conference was summarised by Marcus Ruckstädter, sales manager of Z+G, by saying that dry offset 'direct' printing of cups, tubes and lids is the workhorse of the industry being the fastest and most economical. Nevertheless, the other processes have their own advantages and disadvantages but only by co-operation can success be achieved, whatever the decoration process.■

PISEC reveals secure solutions

The 4th annual PISEC convention brought together brand owners, converters and suppliers of brand security solutions, and revealed a range of fascinating solutions to the global threat of product counterfeiting, diversion and piracy. **Andy Thomas** reports

Security and consumer convenience from RFID chips

This year's Product & Image Security Convention (PISEC) was an excellent showcase for new brand protection solutions which can be implemented by label converters in partnership with specialist supplier companies. The PISEC convention is a good forum, since it enables delegates to hear the views of users, suppliers and inventors on the changing problems and the methods used to fight counterfeiting. Professionals from government, finance, commerce and brand protection meet with suppliers and developers of technologies that address piracy, counterfeiting, tampering, stock loss and supply chain and security issues.

MediaSec Technologies announced the launch of a new anti-

PISEC 02

counterfeiting solution called MediaSignPrint, which utilizes a patent pending digital copy detection pattern, designed to withstand sophisticated scanning and copy attacks. This technology can be combined with existing security features such as digital watermarking, bar-coding, holograms, security inks, etc.

MediaSignPrint features a unique, custom designed digital image, which is printed on the package or label of the product. A simple scanning process is used to discern a copy from an original. Additionally, machine-readable, covert track and trace information can be embedded within the image using MediaSec's patented digital watermarking technology. The technology uses a process that scrambles, distorts, overlaps, or otherwise manipulates images, making them unreadable by the naked eye. When an encoded image is viewed through a decoder, the unreadable image reappears.

The process can be applied in many different ways. For example multiple messages can be applied to the same line, which would appear differently depending on the angle of viewing.

The encoding needs to reside in areas that are 'screened' in some way, with optimum percentage ranges between 20-70 per cent. This applies to spot and process colors. The process has been tested using offset, gravure and flexo printing.

Starboard Technologies – which also uses an encypted image security solution (called Scrambled Indicia) – announced at PISEC a strategic alliance with Graphic Security Systems Corporation (GSSC), which prepares the ground for the company to offer solutions to the European branded goods market. Starboard CEO Udi Ronen, noted: 'Unpredented growth in all our activities over the past 12 months has led us to the decision to invest heavily in the European market.' Local sales offices will be established in both the UK and Germany.

Trace Tag International was promoting its CypherMark technology, a biotech tagging system which applies unique codes to a wide variety of liquid and solid materials. The system is composed of two chemical components, – a sub-micron fluorescent

Dotrix security partnership brings reward

At the PISEC awards ceremony, dotrix n.v, the Belgian developer of the.factory inkjet digital press, was awarded an 'Outstanding Achievement in Counterfeit Deterrence' award. This is the second time this award has been given to dotrix. In 1999, when the company was still called Barco Graphics, the award was in recognition of FORTUNA software, dotrix's digital design and assembly system for security printing.

This year, dotrix's technology innovation and the company's ability to partner with other organisations in the development of solutions to fight global counterfeiting was also credited. As well as the security applications already possible on the.factory, dotrix has recently partnered with Swiss security specialist, AlpVision, to develop a unique integrated solution for invisible personalisation and anti-counterfeiting of packaging and labels.

The Dotrix/AlpVision solution is a digital watermarking system based on AlpVision's patented Cryptoglyph technology. Encoded data is printed by the.factory in the form of tiny, indelible pixels, invisible to the naked eye. The digital watermark composed of the appropriate security information looks like the grain of the paper, with no effect on the design of the document, thus allowing greater coverage of the page and making even greater problems for counterfeiters. One of the differences compared to traditional digital watermarks is that Cryptoglyph can be overprinted on any underlying graphical design, and on standard white paper.

Says dotrix's manager of security systems, Jan Van Laethem: 'The beauty of this system is the simplicity and low cost. The changes all happen at the software end so there is no expensive adjustment to the.factory or change to the printing process and the resulting secure documents are virtually impossible to reproduce.'

The data embedded in the Cryptoglyph is easily retrievable with a standard digital scanner and a dedicated software application but remains difficult to reproduce or decipher. The system relies on mathematical security to encrypt the data. Each user has a personal 'secret key' composed of 128 bits and, therefore, unbreakable by current computational powers.

The system does not require expensive inks or security paper although combined with other security tools such as holograms or special papers, the system would provide extra protection. The system combines elements of AlpVision's software with dotrix's InSider front end for personalised security printing.

It is interesting to note that dotrix is supplying the imaging engine for Mark Andy's DT press series launched at Labelexpo Americas in Chicago last September. The press combines a conventional 2200 flexo press body with a six-colour UV inkjet imaging unit, and the possibilities for creating security labels in-line is clear.

bead which indicates the presence of the marker, and DNA which is the chemical structure giving the unique code.

CypherMark beads are in the range of 1 to 10 microns with a variety of physical, chemical and surface properties, dependent on the application. Each bead can be fluoresced, allowing easy detection.

GLOBAL ID was talking about its e-Seal technology, an embedded, electronic ID solution for brand protection. It involves directly integrating a machine-readable tag into products such as glasses, textiles, perfume, pens as well as medical and pharmaceutical products.

The US Transportation Department has completed a test of e-Seal technology designed to assist in securing cargo containers at ports and border crossings. The e-Seal radio frequency device transmits shipment data as it passes a reader device and indicates whether the container it is attached to has been tampered with.

Smart card

Of particular interest to the label converter community, Global ID has also added smart card specialist PAV CARD to its list of partners, which allows it to offer 13.56 MHz smart cards and labels as well as 125 KHz based systems.

PAV CARD is involved in a variety of card-based projects supplying both memory and processor chip cards and contactless RFID-based cards and transponder inlays. PAV CARD's latest SCID ST transponder inlay can be used to produce ISO 15693 compatible smart labels, smart tickets and contactless cards designed for applications dedicated to the areas of logistics, industrial automation, tracking and consumer products.

Security Print Software was promoting the Fusion Screen security process, a special raster generated using one of the new modules of the Security Expert software programme. This makes a flat tint that can be placed anywhere on the artwork, and at any size. Being a monochrome tint, it is easy to incorporate into any document and is simple to print. The user determines the frequency content of the coded image, allowing custom frequencies and angles for different jobs to be selected. Decoders then work optimally only with that frequency. The shape of the halftone cell can be specified from a selection of eight different shapes.

Having set the frequency and angles, the text is then entered using any Postscript Type 1 typeface, – there is a breadth control for the text which determines the intensity of the message when decoded. This file is placed into any program that supports EPS file format, like illustrator, freehand etc. then incorporated into the final job ready for output to film.

Images can thus be easily be incorporated into existing label designs, and shop owners or distributors can quickly verify that they are receiving the real products. The decoders are simply pieces of litho film from the image-setter, which is automatically matched to the Fusion Screen generated. Over-inking or under-inking does not affect usability.

Norwegian company Kezzler introduced a unique numbers-based brand security system, which uses a 16 character long alphanumeric code attached to the product. For consumer applications it will normally be either printed or labelled to the product item.■

packaging
Narrow Web
Issue 2 Dec 02

The journal for:

- Carton converters
- Flexible packaging converters
- Label converters

Inside:

Expo shows film solutions

Running flexible packaging on narrow web presses was an area of increasing interest for both visitors and exhibitors to Labelexpo Americas, held in Chicago in September

Narrow web flexible packaging was one of the most active topics at Label Expo 2002, both on the show floor and in the conference session "Beyond Pressure Sensitive Labels, One Niche At A Time". Observing the show floor and specifically the Mardi Gras theme booth of MACtac, one saw constant activity as this company promoted their partnership with wide web flexible packaging company Curwood. MACtac's "Flexpack Program" is designed to market flexible packaging structures to narrow web converters. These flexible packaging structures offer the narrow web converter Curwood's proprietary sealing layer technology. Curwood has been widely known for their sealant layer technology and this technology has been continually sought by narrow web converters. Until the association with MACtac, Curwood has refused to make films available to other converters. Now narrow web converters have the opportunity to acquire flexible packaging structures with this technology and offer to their customers. In addition to MACtac, both Glenroy, who has been promoting a specific program for narrow web converters for 9 plus years, and Avery Dennison were active in the conference session or on the show floor promoting their programs for the Narrow Web Converter.

The proliferation of sku's, micro brands, regionalization of products, ethnic specific products, short lead times and small runs all make narrow web flexible packaging a fast growing new marketing opportunity for the narrow web converter. The ability of the sophisticated narrow web converter to capitalize on their ability to offer fast turn around, prepress economies, and high quality graphics have not only been recognized by the consumer products companies but also by the wide web flexible packaging converters as well. There are many reports of wide web producers turning to partnerships and other similar arrangements with narrow web converters as they feel the pressure from their customers to fill these needs. As an example, a consumer products company may have adopted the "one stop shopping" method of purchasing where they have one supply for their flexible packaging. Among the sku's there are both long and short run items. Here the wide web producer has two choices. They can run all of the items and absorb the hardship of the short run items or they can partner with a narrow web converter for the smaller run items.

There is a growing trend toward partnering with the narrow web converters. The marketplace is seeing wide web companies seeking out narrow web converters and there are a number of narrow web converters establishing themselves as printer partners with wide web converters. To establish themselves with wide web converters, the narrow web companies are offering to meet strict production and quality guidelines. Formal qualification programs are being designed which include a specific audit program and continuing evaluation of the capabilities of the narrow web companies. In most cases the narrow web companies have shown the wide web companies that they can and will meet all of the criteria that the wide web companies demand. While many Narrow Web Converts who ▶

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Mark Andy/Comco ProGlide MSP press at Labelexpo Americas 2002

> "In most cases narrow web companies have shown wide web companies they can meet all their quality criteria"

can meet and even exceed the wide web converters demands, there is at least one narrow web converter who has not only been able to meet the highest quality of wide web flexography and gravure printing, but has exceeded this quality with a 26 inch wide Mark Andy / Comco Proglide press using water based inks. This converter, Eagle Flexible Packaging of West Chicago, Il has been successful in converting several gravure jobs to flexo with their high definition flexo printing.

Narrow web press manufacturer Mark Andy reports similar high interest in their presses capable of serving the narrow web flexible packaging market. At LabelExpo 2002 there were a high number of discussions involving narrow web flexible packaging converting. At their recent seminar at the Comco Advanced Technology Center in Milford, Ohio the Proglide MSP converting platform equipped with the Energy Science, Incorporated's EZY Cure EB System produced a medical pouch structure of PET / Foil / Poly Sealant. The medical pouch was printed and constructed in one pass through the press and a finished product ready for shipping was produced. Traditionally this pouch structure was constructed in many steps. The PET was reverse printed on press. The PET was then taken to a laminator and the PET was Solventless laminated to foil. Off the laminator the material was taken to a hot room for overnight curing. Then the PET / Foil were again mounted on the laminator and the PET / Foil was Solventless laminated to the sealant layer. Then the structure was again cured in the hot room. Not until the next day was the material ready to ship. In this day of JIT, one pass through the press / converting system and ready to ship is creating a good deal of interest. The converter who has this capability will have a head start on the competition.

Several people who where at the seminar in Milford, Ohio in the spring were at the MarkAndy / Comco exhibit at LabelExpo 2002 expressing continued interest in Proglide MSP press and in the future growth of narrow web flexible packaging converting. In addition to many narrow web converters from the United States, there was a keen interest from several converters from Mexico as well as interest from Australia and else where in the world. The availability of the MarkAndy / Comco R&D press in Milford, Ohio will further help the narrow web converters expand into new flexible packaging markets. This R&D press has a number of different capabilities to prove out the right process for converting various flexible packaging products. The press has both UV and hot air drying capabilities, thus making it possible to run UV, water, and solvent inks. There is a gravure deck for both ink tests and cold seal capabilities. There is a large 36 inch chill drum hot air drier for water base lamination as well as to work on coatings and other projects requiring a large amount of drying capabilities. A special lamination deck is being developed for solventless lamination.

As the narrow web converter looks to new markets and ways to grow their business, narrow web flexible packaging offers a wide visa of new opportunities. ■

In-line cartons

At a recent Open House, Edale demonstrated narrow web flexo folding carton production in one pass on a standard Beta press. Bob Bradley reports

Die station converting cartons on the Beta press

Flexography has progressed over the past 40 years from a simple process that was once regarded as being suitable only for printing sacks, and the like, to the stage where it today successfully challenges offset, gravure, letterpress and screen printing in the packaging and label industries. In fact, it is predicted that, within a couple of years, flexo will dominate the packaging market with a 38 per cent share in Western Europe and 76 per cent in North America. By then, flexo is expected to be employed in 39 per cent of packaging printing compared with 36 per cent in offset and 15 per cent in gravure.

This growth trend has been particularly noticeable in the narrow-web sector, with presses having moved to web-widths up to 520mm over the past decade. At Labelexpo Europe 1989 for example, Mark Andy presented a label press which, it was claimed, could print on vinyl, foils and light-weight carton board. At the next Labelexpo, in 1991, Edale demonstrated an in-line flexo label machine which could also be used for packaging production. Since then, experience has shown that, in order to achieve satisfactory results in the packaging role, narrow-web presses had to be designed and constructed specifically for packaging production. Consequently, at Labelexpo Europe 2001, one saw Mark Andy demonstrating their own presses for the tag and label sectors and the Comco ProGlide producing folding cartons for champagne bottle boxes.

Edale, too, have been developing their presses for packaging applications and a number of such machines are already in production. To inform the industry of the progress made in carton production, and demonstrate the capabilities of their machines, particularly to sheet-offset packaging producers and several of the UK's top 10 label producers, Edale recently held an open-house for a fortnight in the show-room at their premises in Romsey, England. The focus of the open-house was to show that narrow-web flexo is now a viable and more cost-effective method for producing finished folding cartons in quantities from as little as 5000 up to 50000.

The presentations began with an introduction to flexo, itemising the reasons why the process has become so important for printing labels and packaging as well as other quality products. Fundamentally, flexo is a simple process that can be used universally. It is suited for different inks, whether water-based, solvent or UV, and practically all substrates. But it is its ability to achieve high quality standards that has proven decisive. Today flexo is able to match the best in offset or gravure thanks to developments in pre-press technology (Ctp) and new, specifically designed plates, the use of anilox rollers in conjunction with newly formulated inks and last, but not least, advances in press design.

Importantly, the investment in a flexo system can be significantly less than required for offset and gravure installations. Resulting from these developments, it is claimed that flexo carton-board production is today one of the fastest growing processes in the carton market.

To substantiate these claims, single-pass carton produc- ▶

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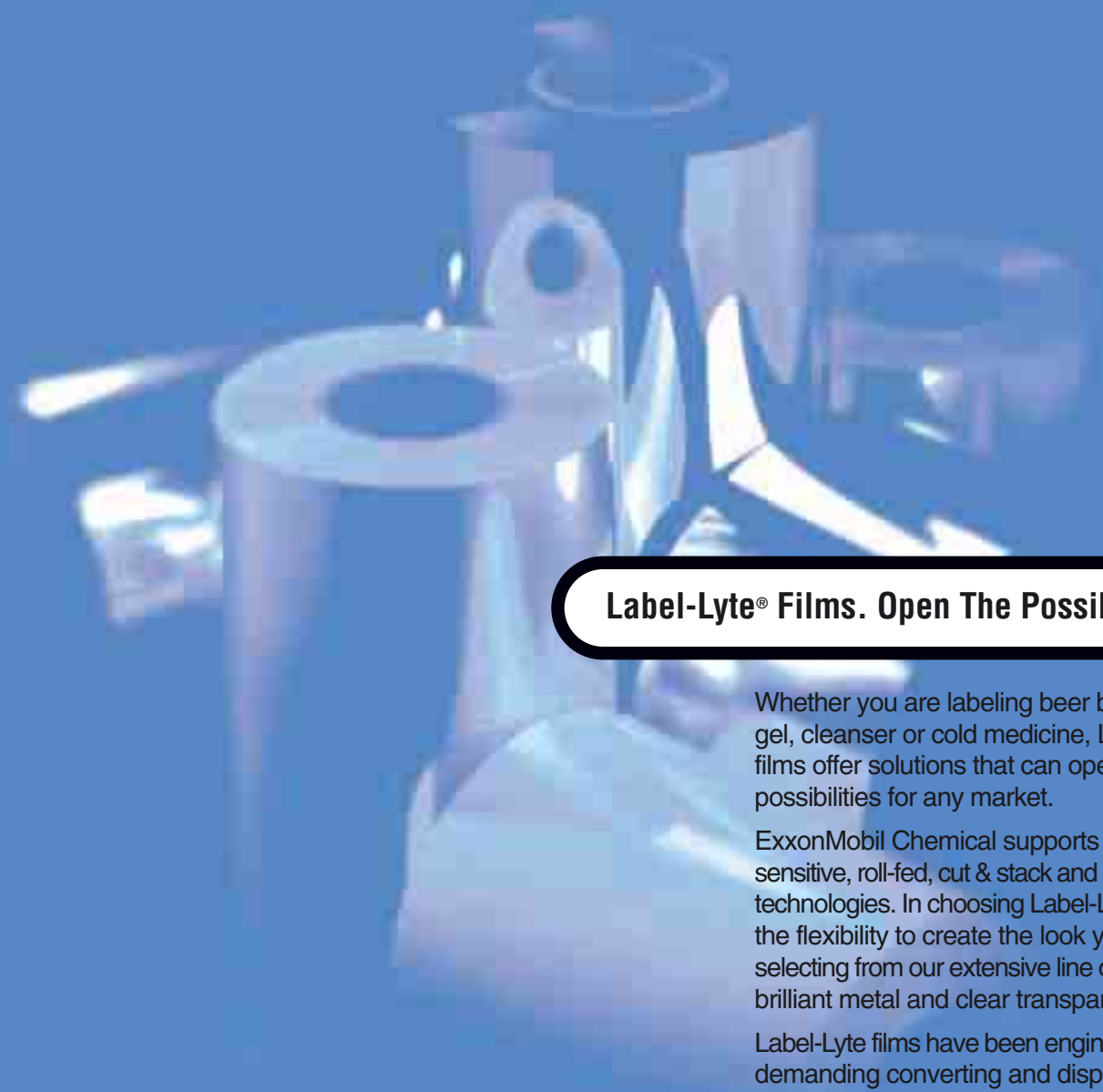

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> “the demonstrations had shown how narrow-web flexo could be used to produce packaging efficiently”

Cartons converted on a standard Edale Beta press

tion was demonstrated on a standard Edale Beta press with a web-width of 250 mm. For the first job, a 35 mm film box, the Beta printed five colours (Process Yellow, Pantone Orange 1655, Process Cyan, Reflex Blue and Process Black) plus a varnish, using Carton Cure UV inks supplied by Akzo Nobel. CtP plates were supplied by PPP, with a screen ruling of 150 lines per inch (60 lines/cm), and a carefully specified range of ceramic anilox rollers supplied by Cheshire Engraving. The carton was printed on a 250 gsm (410 micron) Rochcoat carton board from Cascades.

Following creasing and cutting by a Rotometrics male/female magnetic-shim system, the finished blanks streamed out of the press on a delivery table which can be equipped with a batch counter or a diverging vacuum delivery system to maximise material usage. ‘We chose these magnetic shims because they best replicate the true carton crease,’ relates Edale’s sales manager, Alan Chandler. ‘Male/female cutting provides excellent cut and crease quality and the noise level is reduced when compared with other systems due to the low impact. Being light in weight, the shims are easy to handle and are quickly set-up thanks to the pin location and cross-register locating disks. In addition to reduced tooling cost, a wide range of repeats could be obtained from one magnetic cylinder should the die cassette be independently servo driven using a cam profile.’

Fast changeover is key to short carton runs

Changing to the second job, a pharmaceutical box, demonstrated how quickly jobs can be made ready with minimal waste. The printing cylinders were simply lifted out of the press and replaced with the new ones. The inking remained the same except that the Pantone Orange was not used. Similarly, the shims were removed from the cylinders and the new pair was easily located on the pins and mounted. The second carton job was back in full production in less than 20 minutes.

Terminating the programme, Chandler observed that the demonstrations had shown how narrow-web flexo could be used to produce packaging efficiently, from the raw material to the finished product, all in one pass, thereby reducing changeover times and wastage as well as personnel requirements; only one man operated the press during the demonstrations. ‘And you can see that the quality, thanks to CtP and UV technology, is akin to anything that offset or gravure has to offer,’ he enthused.

James Boughton, joint managing director at Edale, commented on the workshops, ‘We were stunned by the response to what was a limited marketing effort, and we were even more surprised by the number of sheet-fed offset carton produces that attended. The event proved without doubt that with the advent of low tooling costs as a result of shim technology, flexographic single pass carton production will become a serious player for short run small format carton production.’

Key benefits include substantially reduced waste, manpower and capital investment, said Boughton.

‘From discussions during the workshops, it became apparent that to make short run and just-in-time carton production a reality, it must be combined with in-house folding and gluing. How many traditional carton producers would be happy about taking an order for 5,000 pharmaceutical cartons one day, manufacturing them and then delivering them the next day whilst making a healthy profit?’

Towards the end of the year, Edale plans to hold workshops demonstrating the production of flexible packaging, shrink sleeve and in-mould labels on a slightly modified Beta 250 press.■

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AET Q&A

Thinking of moving from paper laminates to printing unsupported film? **Natalie Martin** interviews Leighton Derr, Technical Service Manager at AET Films, to ask for advice from a substrate supplier's perspective

As a major manufacturer of OPP films, AET sees a lot of growth potential in the narrow web flexible packaging market. AET produces a wide range of OPP films, including Clear, White Opaque, PVdC and Acrylic coated, metallized and heat sealable films. Key end use markets include all major food and beverage end users. AET predicts a continued rise in demand based on historical growth, GNP growth, and the transition from other substrates and types of decorations to OPP. End users who have turned from paper to film include SlimFast, Coors, Coca Cola and Nestle.

There are many reasons why plastic labels†are growing so quickly versus wet glue paper labels†in particular. Derr at AET includes 'enhanced graphic quality, such as image definition, color, gloss, and overall appearance.†In addition, the durability of the print web, in terms of moisture resistance, abrasion resistance, chemical resistance and tear resistance, is an important benefit. Flexibility is an important attribute since labels on carbonated containers "give" when the bottle is pressurized.'

A range of containers decorated with OPP film labels supplied by AET

Unsupported film

But switching from the converting of paper-based laminates or wet glue to unsupported film is not a straightforward process, as Derr at AET points out:

'This is not a simple question to answer; however, there are three fundamental differences between printing paper versus printing an OPP film:

- inks formulated for paper will probably not adhere to film;
- the liquid in inks has to be dried off the film surface, whereas those liquids are typically absorbed by a paper substrate;
- most paper presses cannot control tension at the low levels required by OPP films.'

Derr also points out that OPP films stretch when pulled through a press, which has important consequences. 'When the tension that has been applied to the film is let off, the film will want to recover back to its original length - imagine stretching a rubber band. This is commonly called 'snap back.' When the film is heated - which is required to dry solvent or water from the ink and/or adhesive - it is softer and will stretch more at a certain applied tension than when it is at room temperature.' This means the narrow web press has to be properly specified. 'The press would need excellent web tension control in the 0.50 - 0.75 lb/in width range. Inks formulated for film would have to be used, and adding a dryer might be required. Probably a new press would make more sense than retrofitting an older press.'

For the future, AET sees exciting new technologies on the horizon, including cold seal release films replacing heat seal; digital graphic design and flexographic enhancements; and the movement of PET to hotfill PET. ■

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Packaged to quench your thirst

Look at the contents of your fridge – if you're an average consumer, it's probable you have at least one of the following on your shelf top; bottled water, carbonated soft drinks, single serve dairy drinks, flavored alcoholic beverages or beer. **Natalie Martin** reports

> “Packaging is replacing other conventional means for advertising due to reduced marketing budgets”

It’s mostly all about convenience these days and more than ever these beverage products are marketed to ‘fit’ our varying lifestyles. If you need proof then Chris Weir, market development manager, Food and Beverage, Avery Dennison, presents the facts: ‘In 2002, more than 3,000 new beverage products were introduced. The beverage labeling market is worth 2.1 trillion square inches of material, up two per cent from 2001.’ Need some more? ‘Flavored alcoholic beverages will bring 20 plus billion square inches to pressure sensitive in 2002/2003. The biggest growth segment is in water but carbonated soft drinks still dominate the beverage marketplace.’

Did you know that the average person consumes 64 oz of water per day? The interesting message here is that people no longer want to drink straight from the tap but instead, will pay money to buy expensive bottled branded waters. With a 30 per cent growth rate per year, branded water sales have unlimited market potential in beverage labeling.

Rising interest in health and exercise, along with busy lifestyles, have also increased the demand for energy and sport drinks, iced teas and coffees including the single serve and ‘new age’ beverages. Weir names Snapple Elements, Frappuccino, SoBe, IBC Root Beer, AriZona Iced Tea, Nantucket Nectar, Anheuser-Busch Bud Light to name but a few who chose the pressure sensitive route. Captain Morgan’s Parrot Bay, originally launched on glue applied paper, failed to make shelf impact and was subsequently re-launched on clear PS that exceeded all forecasts.

Marketing trends

‘It’s a good time to be in beverage packaging,’ claims Mary Ellen Reis, president of consultancy firm Packnology. Marketers are constantly seeking alternative creative labeling options. Recent innovations include a folded carton to store cans in a special ‘fridge pack’ or downsizing drinks to fit into kids’ lunchboxes.

Converters have the opportunity to capitalize on these branding exercises. End users are relying on packaging suppliers to provide solutions. ‘Remember the package evolves. It never remains the same. Quality and service remain critical factors, price is not a guarantee of future business,’ adds Reis.

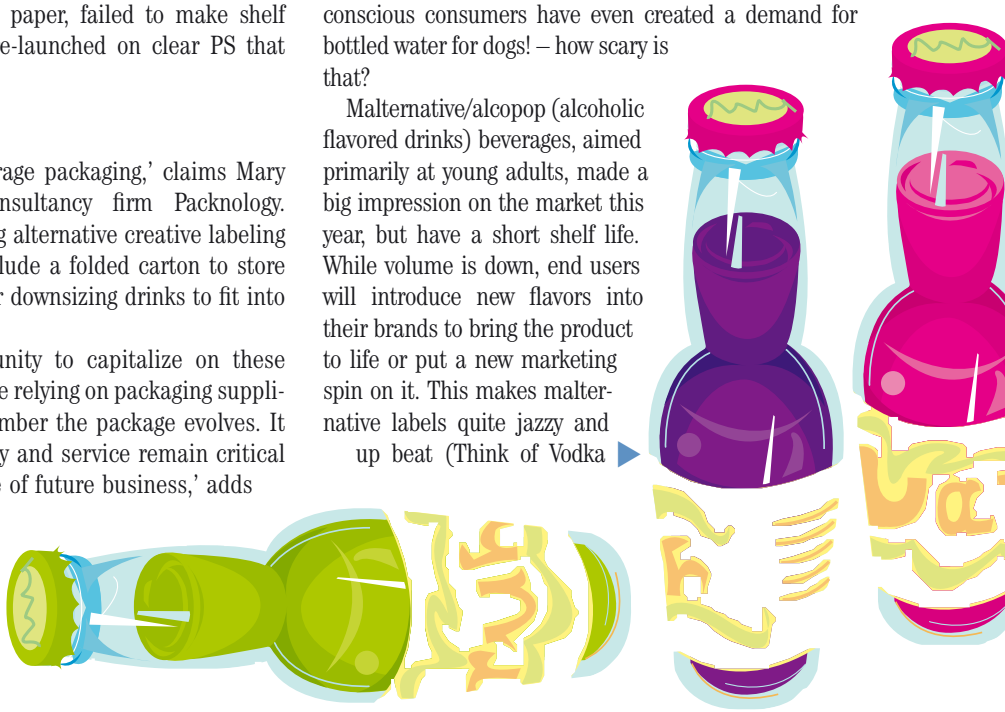
As president, Reis is accustomed to dealing with end user and converter requirements. She classifies beverage as anything liquid that is prepackaged and consumable by consumers and recognizes that the latest labeling trends are pressure sensitive and shrink sleeve labeling for total package coverage (up 20 per cent annually). ‘Shrink labeling allows all of the package to be labeled (Nesquick 20 oz. PET for example) and can be used with contoured containers making the container and label unified visually. The most popular labeling materials are associated with the shink label business: PVC, PETG, OPS and BOPP. (in order: polyvinylchloride, PETG, orientated polystyrene, and biaxiallyorientated polypropylene).’

Another big growth area is flexible pouches (Capri Sun, Minute Maid, Hawaiian Punch) for the kids’ lunchbox market. Continues Reis, ‘Less material, easy grip, less waste – ease of use are key factors here.’

For liquor labeling, she points out that it’s mostly acid-etched bottles and the ‘no-label’ look (Grey Goose Vodka), plus high definition shrink sleeve labeling for holiday and regional promotions.

What’s driving these trends? ‘Packaging is replacing other conventional means for advertising due to reduced marketing budgets. Also, with the ability of packaging to achieve higher graphic standards, it is becoming more and more important as a marketing tool. Also, with demands for convenience and mobility, plastic bottles use is growing.’ Reis jokes that health conscious consumers have even created a demand for bottled water for dogs! – how scary is that?

Malternative/alcopop (alcoholic flavored drinks) beverages, aimed primarily at young adults, made a big impression on the market this year, but have a short shelf life. While volume is down, end users will introduce new flavors into their brands to bring the product to life or put a new marketing spin on it. This makes malternative labels quite jazzy and up beat (Think of Vodka ▶






Mule, Skyy Blue, Bacardi Breezer) and new flavors and line extensions may help to ensure longer category growth in this segment. Bacardi Silver was launched as a joint venture with Anheuser-Busch. This drink is marketed with a clear PS label, applied to a clear bottle, and the liquid inside is clear. According to Yousef Zaatar, AVP BACARDI North American Region, NPD – Packaging, this was carefully planned out to make the product look as pure as possible. He says, 'Our company wanted to create a quality premium product using the best package. We wanted to strike a balance between young and elegant and to show that this product is dynamic.' Marcos Perez headed the project and then the division lead the R&D for that product which took between eight months to a year. 'Our bat logo is one of the most recognized symbols throughout the world which is both on the label and the cap. We want our brand to inspire consumer confidence, using PS helps us to achieve that.'

'Consumers love anything innovative and new,' says Packnology's Mary Ellen Reis. 'Beverage marketers are constantly challenged to exceed the expectations of today's consumers in any target market – kids, teens, young adults, mature adults, seniors. The functional beverage category targets these segments with functional elements suited for each market, like bright colors for kids, caffeine for teens, energy for young adults, Packaging is replacing other conventional means for advertising due to reduced marketing budgets vitamins for mature adults and memory for seniors.'

At Packexpo 2002 in Chicago, Il, shrink sleeves were key feature, a 360 degree label that provides maximum graphic coverage and makes a product stand out. In fact, Clearly Canadian Beverage Corporation has reintroduced its sparkling flavored water line-up with Seal-It shrink labels. Sharon Lobel, president of Seal-It Inc., states, 'We are very excited by the evolution of Clearly Canadian's colorful graphic designs. Seal-It shrink labels work extremely well for this type of application.' The graphics are being printed on heat shrink PETG in 10 vivid colors and each of the eight designs reflects its own contemporary geometric pattern. The properties of PETG allow the label to shrink to the contours of a 14-oz glass bottle with an elongated neck.

Seal-It has also recently printed a dazzling new label for the introduction of Blackberry, the fourth new flavor for the Reebok fitness water beverage line-up. Made of heat shrink PVC, the Seal-It labels for Berry, Citrus, Natural and Blackberry are printed in 7 colors including a silver metallic that makes the labels glisten. Specially formulated inks, and the glossiness of the film, give the labels an extra 'pop'. The striking colors reinforce the flavors and enhance the branding of the water. The labels are applied to both package sizes, including the 24 oz single serve and 20 oz contoured and ribbed bottles by automatic equipment.

Of all labeling techniques, shrink sleeve labels are one of the fastest growing film label segments. Mary Sullivan, manager, Global Marketing, Mark Andy, Inc. says, 'Reported projections boast six to seven per cent increases per year over the next five years. Packagers are realizing the shelf appeal and sales gains from shrink sleeve labeling. More and more consumer products are moving to this type of packaging. It is a solid profit center that will allow converting businesses to grow over the next several years.'

Sullivan mentions that shrink sleeves can be used for all types of refrigerated beverages and some non-refrigerated beverages.

From a press manufacturer's viewpoint, Sullivan says that cut-n-stack also plays a strong roll in the beverage category. 'With bottled waters and other beverages using glue-applied cut-n-stack application systems the trend is moving from paper ▶

"Of all labeling techniques, shrink sleeve labels are one of the fastest growing film label segments"

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> "End users demand PS, wraparound, multicolor, and high end graphics"

cut-n-stack labels into the film and plastic labels. This opens a door for opportunity for a narrow web converter to broaden its offering to the packaging industry.'

At the same time, Sullivan points out that roll-fed paper and film pressure sensitive labels are replacing sheet-fed offset at a nice rate all over the globe. 'We've seen more and more trend in this direction from many beverage packagers including prime label (wine and spirits). This allows narrow web to continue securing share from the sheetfed competition.'

Mark Andy/Comco's ProGlide MSP was designed specifically to run these film and flexible packaging substrates, and as of the last Labelexpo, a number of press manufacturers were showing machines capable of handling a wide range of unsupported substrates.

Case study

With a turnover of $220 million, running 100 narrow web flexo presses ranging from 6" to 18", 15 per cent of WS Packaging Group's entire business is focused in beverage and liquor product labeling. Pete Peterie, marketing manager, is quick to zone in on the market potential of the fast food culture, especially in the US. How many of you admit to having a beverage holder in your car?

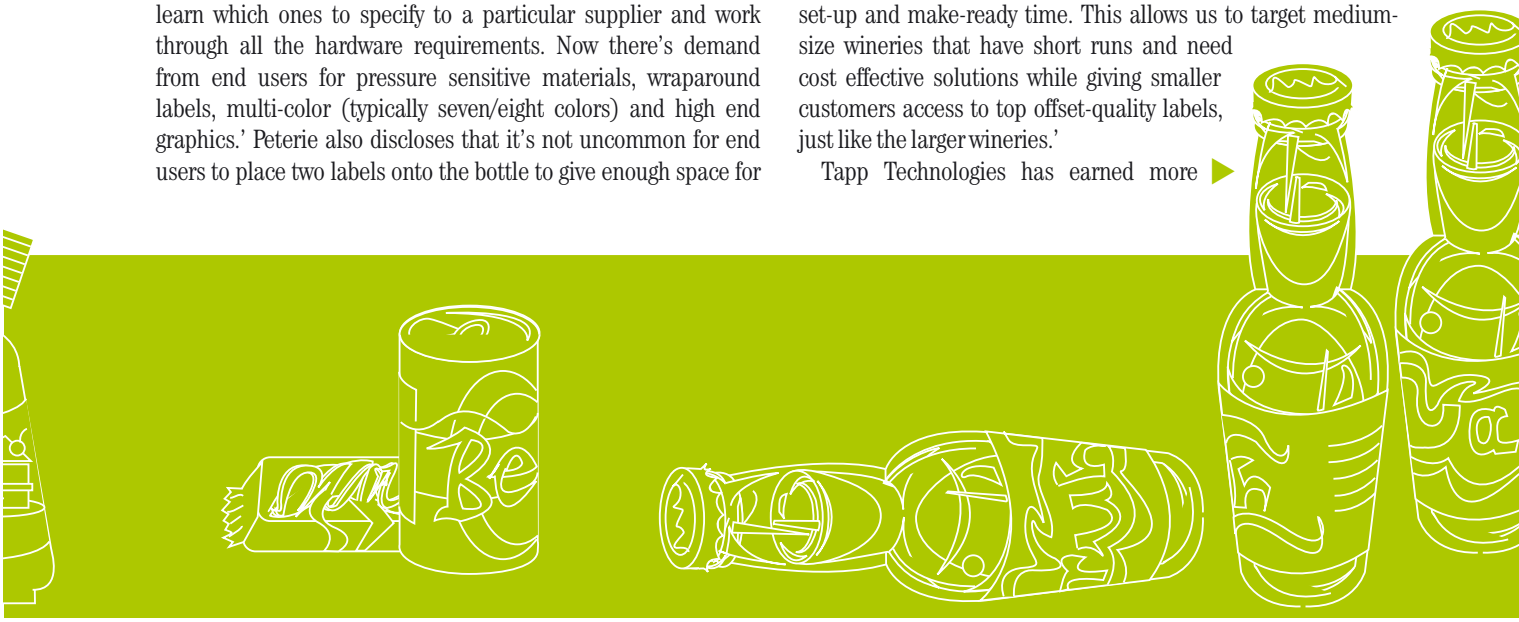
'Take 'Fiji' for example, a spring water that's bottled inside a PET contoured bottle and you have a high end product that you're proud to be associated with. Seventy five per cent of these applications require custom materials, so as a converter you have to learn which ones to specify to a particular supplier and work through all the hardware requirements. Now there's demand from end users for pressure sensitive materials, wraparound labels, multi-color (typically seven/eight colors) and high end graphics.' Peterie also discloses that it's not uncommon for end users to place two labels onto the bottle to give enough space for regulatory information.

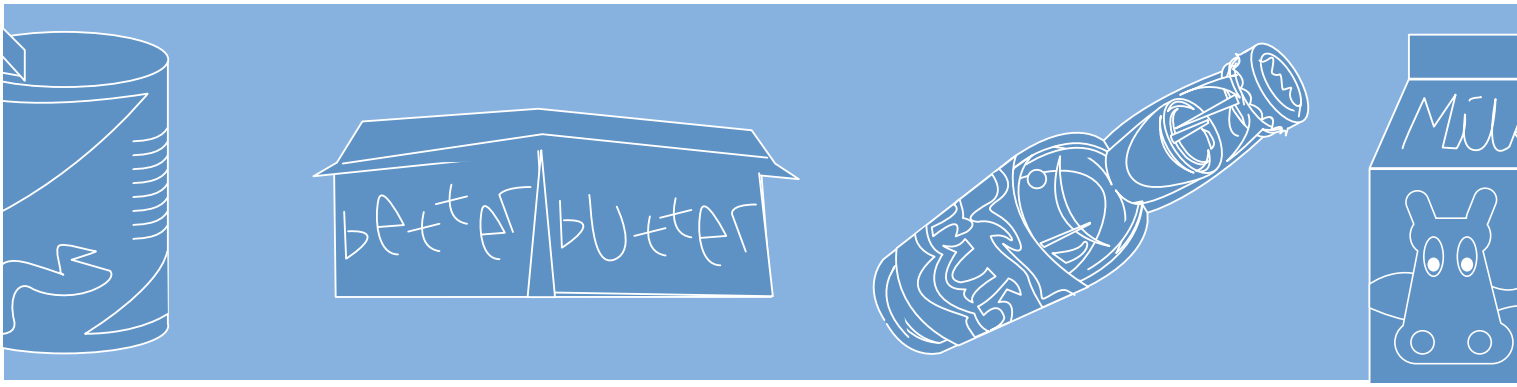
Todd Ostendorf, also marketing manager with the group, believes the three biggest challenges on press are controlling static, tension and ink adhesion. 'It's easier to run thicker films than thinner films but we work around these obstacles. We're running a lot of process,' he says. 'Five years ago it used to be simple one/two color line work, now the bottom line is five/six color work. Labels are now more prime as the beverage market is becoming more sophisticated. You have Coca Cola, who introduced its own water brand, DASANI, competing against other bottled water products. There are more competitors in beverage than there has ever been and the quality just keeps on going up.' Consumers are paying premium prices for a simple product through decoration, either through the use of metalized film/hot stamping or holographics. Ostendorf argues that one iced tea is no better that any other so you're paying for the convenience and often a unique blend of flavor.

WS Packaging Group also runs narrow web digital presses to offer short runs, eliminating plate changes. Magnetic dies are used on the digital presses to keep it economical. 'It fills a niche within our sales and the print quality is excellent, the digital presses are always very busy. Those end users who are coming up with the innovative labeling do look to change their labeling on a continual basis because they want to make an emotional connection through the packaging to the consumer. It all relates to decision making at the shelf. The labels with that extra pizzazz in beverage are going to remain strong.'

Another converter that's using digital is Tapp Technologies, which recently installed two HP Indigo ws4000 Presses for short runs, proofing and variable imaging for high-speed, high-quality, short-to-medium-run label printing on demand in up to seven colors. 'We're very excited about our move into digital offset, as we feel it is the future of printing,' said Jay Tapp, president and CEO, Tapp Technologies, Inc. 'The deciding factor was the massive improvement in graphic resolution with HP Indigo Press ws4000 technology, together with the huge potential savings in set-up and make-ready time. This allows us to target medium-size wineries that have short runs and need cost effective solutions while giving smaller customers access to top offset-quality labels, just like the larger wineries.'

Tapp Technologies has earned more ▶





than 130 international awards and been voted the world's best offset printer by the World Label Association six years in a row. The addition of the latest HP Indigo digital label press enhances its roster of high-end printing and finishing equipment and allows the company to produce fast RIP-to-press short runs with resolution quality approaching its standard 300-line screen waterless offset lithography.

'The HP Indigo Press ws4000 provides us with short-run digital 'waterless' offset capability that allows our designers to move quickly to finalize new label designs – in minutes, rather than hours or days,' says Tapp. 'We can use the ws4000 for proofing as well as producing short runs, and in particular for labels with a promotional component or variable information content. We also expect to do quite a bit of six-color process work. With HP Indichrome and a seventh Pantone color available, there is virtually no limitation to the reproducible color spectrum.'

For Tapp, the move into HP digital print is part of his vision of building a wine label company that transcends traditional printing methods. 'Any successful company needs to stay on the forefront of technology and be prepared to invest ahead of the curve,' he said. 'We see our HP Indigo investments as the next critical step in the pursuit of excellence – and believe it will translate directly into enhanced service and quality.'

Could you fit the market?

So what does this all mean for converters considering entry into the beverage labeling market? 'Converters need to be business savvy and confident in their capabilities,' argues Mary Ann Kucera, MACtac Printing Products marketing manager, roll label films. 'This competitive market demands excellent control of operating costs to achieve the limited margins that the industry allows. Converters should be established in other markets first before jumping into beverage labeling. The beverage labeling market requires a technically competent converter who can handle thinner, more delicate materials to produce quality labels. Registration is often difficult in high-volume label printing, as liners become thinner. A successful converter also understands adhesive capabilities so he can recommend the correct labels for the industry's wide variety of substrates.'

Kucera also believes that the beverage market is fragmented and there is a major segmentation in marketing strategies, not just among beverage types but also within beverage segments.

'Naturally, milk is marketed differently than ready-to-drink (RTD) tea, but RTD teas can be marketed in many ways, such as thirst quenchers to select groups and as mood enhancers to other groups. The marketing differences are evident in packaging as designers develop containers and labels to appeal to the intended targets.' She goes on to describe that new age beverages – those that promise a feeling of well-being or greater health and feature herbs like St. John's Wort – are gaining in popularity, prompting lavish packaging to provide shelf impact. 'Labels for these products often feature specialty printing like clear UV varnishes for texture or hot-stamped holographic images to catch buyers' attention.'

Certain market segments remain static in labeling options, says Kucera. 'For example, the dairy market will continue to predominantly demand white, flexo-printed paper labels that feature cold-temperature adhesives and are overlaminated for protection from spills.' Moving onto wine, 'There is a noticeable differ- ▶

> "Beverage labeling requires a competent converter who can handle thinner, delicate materials to produce quality labels"

> “Your press should be high speed, be able to handle large roll lengths and polyester liners”

ence in the wine label market between mass-marketed wines, which may feature clear labels or labels with eye-catching metallics, and expensive specialty wines, which often use high quality paper with intricate foil-stamped decorations.’

For example, Vintage 99 Label, a small converter which started out three and half years ago, printing flexo on two Mark Andy, 15” 8-color presses, with embossing and foil stamping in line, has found its niche printing wine labels for local wineries in the Californian State. ‘Wineries are pushing out the envelope requiring maximum impact thru color and a shift towards not just one label but two to three piece labels. There’s a demand for mainly paper labels and foiling,’ says David Bowyer, joint owner.

When an end user is choosing a material for their product they have to also consider the shape of a container and the bottling process. ‘If labels are affixed to containers prior to being filled, the labels must resist wicking in contact with moisture, especially for highly colored beverages, like teas and juices, that stain labels,’ says Kucera. ‘Whether applied before or after filling, labels on containers that are filled with warm beverages must be able to conform to the containers as they change shape in the cooling process. Labels on cold-filled beverages like dairy require good initial grab, resistance to condensation and strong adhesion to low surface energy substrates. Hot-melt adhesives are generally preferred in these applications as they stick well to polyethylene, which is commonly used for dairy jugs.’

Container substrates are also a key factor in the wine label market as bottles feature a variety of coatings for aesthetics and abrasion resistance. The coatings create a low energy surface, causing the need for strong label adhesives. Hot melts generally bond better to coated bottles, however, requirements for water washability may mandate an acrylic-based adhesive.

If you’re deciding to buy a press, combination printing would give you scope to meet most end user demands, but most importantly the press will have to be high speed, be able to handle large roll lengths and polyester liners. This advice is provided by Michelle Ostiguy, market development representative, FLEXcon Packaging Business Team, who notes the growing importance of clear-on-clear in the beverage market.

‘Pressure-sensitive film labeling distinguishes the product from others, capitalizing on the clear no label look concept. This look cannot be achieved with paper. In addition, the use of unique bottle/container shapes requires label materials that will conform to the curves and compound surfaces of the bottle/container and, additionally, larger panel labels are being used to maximize label and graphic coverage.’

As always the primary challenge for supplying this market has been with material cost. As with most label markets, converters and end-users are looking for ways to reduce the label cost while maximizing on-press efficiencies. Thinner gauge films typically offer higher yields and more economics to the converter. However, thinner materials provide converting and dispensing challenges. ‘Finding the appropriate balance between film thickness and economics has been an ongoing challenge. For the beverage and liquor markets, the most popular materials being used are polypropylene films. This family of films include biaxally-oriented (BOPP) and machine-direction oriented (MDO) polypropylenes,’ says Ostiguy. Polypropylenes, in general, have

good clarity, good rigidity for dispensing, ease in diecutting and excellent product content and solvent resistance, she continues. In addition to these properties, BOPPs are also able to withstand the pasteurization process. MDOs provide the necessary conformity for large panel and curved/compound surface label applications. 'BOPPs typically do not have the appropriate conformability to fit around the curves and compound shapes of bottles. In cases where conformability is required, MDO polypropylenes are most widely used in the beverage market.'

Price will continue to dominate marketing trends in the beverage label market. The end user is typically more concerned with looks and price as opposed to a label's properties for printing and converting – except, of course, if the liner is going to affect the labelstock. Kucera from MACtac, while accepting the demands on printers and converters to run high-volume labels with more delicate materials, believes that white and clear polypropylene labels are popular material choices because they are easy to die cut, print and dispense off the liner. 'Metallized biaxially oriented polypropylene (BOPP) labels are popular with marketers because they provide shelf impact. Converters like BOPP labels because they are inexpensive and easy to use,' she says. 'For high-speed printing, polyester liners are preferred as they are strong even at thin gauges. The beverage label market is a difficult one to compete in as product designers and label producers look for the least expensive means to package and label products. The pressure to drive label costs down pushes manufacturers to produce thinner gauge materials and prompts designers to consider alternatives to pressure sensitive labels.'

Greg Martin, flexible packaging business manager, MACtac Printing Products, explains that a sizable portion of the overall flexible packaging market – and beverage specifically – will gravitate to narrow web printers. 'Printers who focus a portion of their people, equipment and expertise on developing business in this area will be rewarded with a diversification of their business,' says Martin. 'While 'juice boxes' have been around for years serving the children's market, single-serve, stand-up beverage pouches for adolescents through young adults on the go are enjoying rapid growth. I recently visited a major co-packer who is scaling up with a line designed to fill these type pouches at twice the recent industry standard. This fits with the on the go, lightweight, throw it in your backpack trend.'

He believes there is no question the beverage market – and the overall flexible packaging market – is a growth opportunity for narrow web printers. 'Most of the trends are to shorter run sizes, which favor narrow web printers over the traditional wide web presses the major flexible packaging companies convert their products on. Another trend in some segments is 'mass product customization'. Today a line of specialty coffees, cocoas, juices, fruit drinks, etc. might have 10 to 15 different flavors and be packaged in three or four different containers. A number of years ago it might have been offered in five to seven flavors and two different sizes.'

Martin presents the biggest challenges in making the transition:

- Flexible packaging is in direct contact with the food/beverage
- Flexible packaging holds the actual product and, therefore, has more complicated packaging equipment
- Many of the materials are thinner and more extensible than typical label materials

'The competition for labeling business among converters could bring about further consolidation in the industry. The popularity of clear labels on clear bottles won't last forever. We are likely to see new product developments for labeling in the future that are currently only prototypes or even ideas in designers' minds,' says Kucera from MACtac. If you're still unsure, then according to Kucera, think again. 'The surge in new products being introduced coupled with the growth in the use of pressure-sensitive films provide a market opportunity for new entrants.' ■

"Single-serve, stand-up beverage pouches for adolescents through young adults on the go are enjoying rapid growth"

Labelling news

Multi-Color buys Avery Dec Tech

Multi-Color Corporation has signed a definitive agreement to purchase the North and South American Decorating Technologies Division of Avery Dennison Corporation. Avery Dennison's Dec Tech division, the pioneer of Heat Transfer Label technology ('HTL'), is a $20 million supplier of heat transfer labels in North and South America to the health & beauty aids, beverage and food industries.

'I am extremely excited to add Dec Tech and its internationally-known heat transfer technology to our portfolio of decorating solutions and packaging services,' said Frank Gerace, President and Chief Executive Officer of Multi-Color Corporation. 'With this acquisition, Multi-Color now stands as the world's leading provider of both in-mold and heat transfer labels. Combined with our growing leadership in the pressure sensitive and shrink sleeve categories we are now a comprehensive business resource to our consumer products, food and beverage customers.'

With approximately 40 per cent of its sales outside the United States, Dec Tech expands Multi-Color's sales base in Latin and South America. Dec Tech's 120,000 sq. ft. facility in Framingham, Massachusetts adds narrow web gravure printing capability to Multi-Color's wide web gravure, flexographic and lithographic printing platforms.

Multi-Color will also take ownership of all North and South American patents and trademarks related to the Dec Tech brand of 'no-label look' heat transfer labels. Dec Tech has received numerous industry awards for innovation and graphic excellence.

The Dec Tech purchase is expected to close before the end of December 2002 and is projected to be accretive to earnings in fiscal year 2003 ending March 31, 2003.

Once completed, this becomes Multi-Color's third acquisition during the last 12 months. In June 2002, Multi-Color purchased Cincinnati, Ohio-based Quick Pak, Inc., a leading provider of promotional packaging, assembly and fulfillment services, and in October 2001, it acquired Troy, Ohio-based Premiere Labels, Inc., an award-winning producer of pressure sensitive labels.

Technicote gets Xpress

Technicote Inc., a leading manufacturer of pressure sensitive adhesive roll label materials, has acquired the RF Xpress Roll Program Division of Russell-Field Paper. Russell-Field Paper's RF Xpress Roll Program is claimed the industry's first company to offer a comprehensive offering of non-adhesive materials to the narrow web tag and label industry. The new division of Technicote, the 'Russell-Field Xpress Roll Program', will officially begin converting and distributing from the Terre Haute, Indiana facility January 1, 2003.

'We are able to provide our customers with cost effective programs to 'bundle' their non-adhesive and adhesive purchases with one company,' comments David Field – former VP of Russell-Field Paper and business manager for the newly acquired division of Technicote.

EU clears UPM-MACtac merger

The European Union Commission has cleared UPM-Kymmene's acquisition of MACtac, the pressure sensitive materials business from the US based Bemis Company Inc. As L&L went to press, the transaction was still pending approval by the US competition authorities.

In 2001, MACtac's turnover was approx. USD 500 million and it has five production facilites in the US, one in Belgium and a joint venture in Mexico. UPM's Raflatac division produces self-adhesive labelstock in nine countries and its turnover in 2001 was approx. USD 600 million.

Heidelberg firms Gallus ties

Heidelberg has 'further intensified' its business partnership with Gallus by fully consolidating Gallus' results into its 2002/2003 financial year. However, Heidelberg has not increased its 30 percent shareholding in the Swiss-based narrow web press manufacturer, and will continue to operate Gallus as an affiliated company.

Heidelberg CFO, Dr Herbert Meyer, commented, 'With sales totaling approximately €120 million, the Heidelberg Group is consolidating a sound company with favorable future prospects.'

Bernhard Schreier, Heidelberg's CEO, confirmed the group's interest in flexographic technology: 'With 6 to 8 percent growth, flexo printing represents a rapidly growing segment of the print media industry,' commented Schreier. 'By further intensifying our cooperation with Gallus, we will be able to benefit even more from the growing demand for labels and packaging.'

Openshaw acquisition boosts Euro status

Openshaw Group has announced that it has acquired Bousfield, a consolidation which will enhance the companies' market position throughout Europe. The combined businesses serve sales/distribution of consumables and electronic imaging and digital printing equipment, the manufacture of printing chemistry, the conversion of polyester foils and printing blankets and the manufacture of thermographic powders. The combined Group will have a turnover of some £85 million and approximately 500 employees.

David Coltart will be the Chief Executive Officer of the new Openshaw Group and will be responsible for the overall direction and integration of the new organisation. Tony Halker will continue to direct the operations of the Openshaw sales/distribution business and Andrew Christie will continue to direct the operations of the Bousfield manufacturing business.

Latran Technologies new name of Polaroid Graphics Imaging

'Latran Technologies LLC' is the new name for Polaroid Graphics Imaging, one of the industry's leaders in digital halftone proofing systems. The name change underscores Latran Technologies' status as an independent company and erases the last link to the Polaroid name.

Anthony P. Crupi, Chairman and Chief Executive Officer of Latran Technologies, announced the name change, noting, 'The adoption of Latran Technologies as our new name gives us a fresh image platform that enables us to reaffirm our vision as a strong, independent and innovative business enterprise focused entirely on quality digital imaging technologies. Industry segments that we serve include commercial printing, tradeshops, packaging, card manufacturing and security printing.'

The new corporate name is derived from the words 'Laser Ablation Transfer,' the patented technology employed in the company's digital halftone proofing systems to transfer pigmented printing inks by directly imaging or transferring to actual printing stocks.

L&L goes organic

L&L took a stand at the Organex 2002 food show in London recently, bringing labelling and packaging solutions to a wide range of brand owners and retailers including Safeway, Sainsburys, Tesco, Waitrose, Britvic, Budgens, Europa Foods, Golden Wonder, Oddbins, Planet Organic, Infinity Foods, Fresh & Wild, Selfridges, Fortnum & Mason, and Harrods.

Also present in the labelling and packaging village was UCB, whose stand was pretty busy throughout both days of the show.

We will be repeating the exercise next year, so any label converters or suppliers interested in attending should contact the editor (athomas@tarsus.co.uk). If this is a success, we aim to take our 'village' to more end user shows – so watch this space!

Press installations

Edale installs two more Alphas

Edale has installed second Alpha flexo machines into two UK label printers, Paragon Labels in Boston, Lincolnshire and Bondlabels in Basildon, Essex.

Dennis Patterson, operations director for Paragon Labels, says, 'We always have a requirement to produce 10" short run promotional labels. Running 3 to 4 colour jobs on a 5 colour machine is uneconomical and the attraction with the Alpha for Paragon was the short web path from unwind to rewind as well as the remarkably small footprint of 2.5 metres for a 4 colour machine. As with all production environments, space is a major consideration for us.' Production speeds are 80-90 metres/min with rotary die cutting.

Paragon's second Alpha has had web/print width increased to 260mm to suit Paragon's existing format, as well as a hook-on carriage unit to enable the operator to quickly remove and replace the anilox rolls.

Both machines are fitted with Tectonic K1 video web inspection systems and full inter-colour UV from GEW's latest VCP range of air cooled systems. A third machine is planned for next year.

Bondlabels announced the installation of their first Alpha machine in March this year and a second, identical press followed in July. Bondlabels claims to be the biggest producer of plain and coloured die cut label stocks for the retail, trade and computer markets.

Tony Bridge, Bondlabel's technical sales manager, comments, 'With the need for ever greater production with lower wastage levels, many of the Alpha's attributes appealed to us. Not least of which was the amazingly small footprint for a 3-colour machine, thus reducing web wastage during web up and rewind. In addition, our operators produce the range of labels on relatively simple converting machines. The step up to the Alpha's higher speeds and more comprehensive specification, however, presented no serious technical challenges.' Both Alpha presses are equipped with 2 rotary die cut stations and delivery tables for sheeting, with conventional inter colour hot air systems. **e No.201**

Acre installs Webflex 330

Self adhesive label specialist Acre Labels, in Coalville, Leicestershire UK, has taken delivery of a 4-colour, 13" wide Webflex press from Focus Label Machinery.

The Webflex 330 is configured with 4 colours, 2 die stations, laminating unwind/rewind, video inspection, plus combined IR/UV drying. It has been installed along side Acre Labels' existing Nilpeter FA2500 press. The Webflex 330 has been specified to print onto a wide range of substrates from unsupported films to carton board, but will be employed predominantly for self-adhesive labels.

Managing director of Acre Labels, Andrew Davies, commented, 'We have been very happy with our Nilpeter press and needed to add a second, high quality press to cope with increased demand. We were aware that the Webflex press was becoming more established in the UK and have been very pleased with the Platemate video platemounter we purchased from Focus a few years ago. After looking closely at the Webflex, we decided that it offered us the same high quality we had been used to and was very competitively priced. We had a few special requirements regarding the installation of the press and found Focus flexible and willing to make modifications to help with these requirements.' **e No.202**

Ilma scores twice in Germany

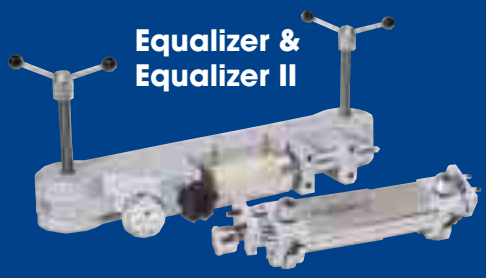
An 8-colour combination ilma 340 UV-rotary letterpress with screen and hot foil stamping units has been installed at FS-Etiketten in Tollwitz, Germany. The company says it was looking for increased quality and higher efficiency as well as enter into combination printing.

Also, Knaup GmbH, a label printer based in Kirchlengern, has purchased its second ilma printing system. The ilma 340 combination press incorporates 10 printing groups and will be supplied by end of 2002. Knaup made himself a name in the high quality sectors of cosmetics, bodycare and beverage labels and expands both its capacity and its combination possibilities with this machine. **e No.203**

Paco Labels installs FBX

Paco Labels of Tyler in Texas is to install only the second FBX press to be built. This will greatly expand the company's capacity for prime-product filmic labels. It also allows Paco Labels to further expand into producing unsupported packaging films, including shrink wraps, for beverages, mineral waters and dairy products. The company already has three existing Roto Press (now part of

Multiscorer



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Equalizer II

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Station

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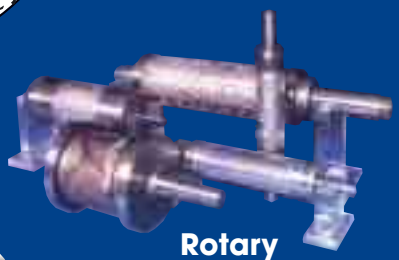
Hot Stamps



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Nilpeter Inc.) flexo label presses.

The US-built FBX-Line features high-capacity hot air dryers, quick-change slide-outprint units with removable ink pans, as well as 'Tool-free' quick changeovers, synchronized print units and a top print speed of 800 feet/minute (see L&L Oct-Nov p.14). Paco Labels will run its FBX-4600 initially with hot air dryers, but has the option to retrofit inter-deck UV-curing lamp units at a later stage. They allow combinations of UV-flexo, rotary screen and hot foil stamping units. e No.204

BASF claims breakthrough

BASF is claiming a breakthrough in the commercial production of letterpress plates which can be digitally imaged.

This development allows the direct transfer of data direct to the printing plate without the intermediate step via a film negative. The plates incorporate a black mask layer into which the information is transferred by means of a laser beam – exactly as with current digital flexo plates. Indeed, the nyloprint D plates _– available on polyester and steel bases – can be imaged using existing flexo imaging lasers. BASF says there are 'clear quality advantages' in the digital letterpress printing plates, as well as a reduction in total processing time.

nyloprint D is available in versions for label printing, and for tube, cup and can printing.

BASF Printing Systems has also announced advances in conventional flexo platemaking techniques, with a new plate specifically designed to work with Artwork Systems' FlexoCal software. BASF says nyloflex AFC (AFC stands for ACE FlexoCal) enable print quality similar to digitally made printing plates. Other calibration tools can also be used.

'With FlexoCal, the tonal range can be extended into the highlight area, the gradation of the tonal values is altogether finer,' says BASF. 'The nyloflex AFC ensures excellent ink transfer particularly with water-based and solvent-based printing inks and a high print-run stability.'

The new nyloflex AFC printing plate is available in plate thicknesses of 1.14 and 1.70 mm in sizes 762x1016 mm (30 x 40"), 920x1200 mm (36 x 47") and 1067x1525 mm (42 x 60"). It can be processed with all units of the nyloflex range of devices.

Finally, BASF Printing Systems announces the nyloflex FE for pre-printing a white background in flexographic flexible packaging applications. It is resistant to the ethyl acetate (ester) and spirits contained in two-component inks for preprinting a white background. The new monolayer plate will replace the multilayer plate ME and is available in a thickness of 1.14 mm and in the sizes 610 x 762 mm (24 x 30") and 762 x 1016 mm (30 x 40"). e No.205

Pharmacy solution

Standard Register's TotalScripts, a duplex-printable prescription label solution, has been added to the Optra T series of printers, Duplex category on a leading manufacturer's Converter List.

The pharmacy solution has proven to have consistent and reliable performance on laser printers with duplex printing. TotalScripts passed stringent testing including label feed, toner adhesion, adhesive contamination, low and high humidity.

Standard Register's TotalScripts combines prescription labels, paper for patient advisory information, and a printable liner for pharmacy advertising and marketing on one sheet. This unique duplex printing approach allows the entire sheet to be utilized leaving no waste. It saves time, helps to eliminate prescription errors, reduces costs and gives the pharmacy added control and flexibility in its promotion and communication efforts. Its customizable construction integrates 100 per cent into current health promotion and marketing software applications used by pharmacies. e No.206

Brass Pigment adds Gold, Metallic effects

Engelhard Corporation's Lumina Brass pigment is a mica-based, non-metallic effect pigment that brings a metallic gold effect to plastics, coatings and inks. It features increased chromoaticity, higher color purity and more brightness and hiding power than traditional non-metallic metallic brass colors, says the company.

Lumina Brass is the newest member, and first metallic-looking pigment, in the Lumina family of colors that includes six mica-based interference colors: gold, red, green, turquoise, aqua-blue, and red-blue.

A non-reactive and non-tarnishing pigment, Lumina Brass is compatible with both solvent and water-based liquid coatings, as well as with powder coatings.

It processes easily in injection molding, blow mold or extrusion processing, and can also be used in inks for gravure, flexo and screen printing processes. e No.207

Technology

Mexican trade delegation visit

Hector Sanchez Cuevas (right), sales and marketing manager (Mexico Division) for Walsall Print Company, demonstrating his company's high quality label printing to senior figures from the Tequila industry and Mexican government

Walsall Print Company, one of the UK's leading providers of high quality labels for premium and FMCG brands, recently hosted a visit of senior figures from the Tequila industry and Mexican government.

The visit enabled representatives from the Tequila industry to find out more about the technology employed in the production of high quality bottle labels for their strictly protected product. Walsall Print Company already has a large client base in Mexico, with many top Tequila and beer brands placing their label printing with the West Midlands, UK company.

The delegation included senior officials from the CRT (Consejo Regulador del Tequila), and senior executives from most of the largest Tequila producers. Also visiting were representatives from the Mexican Economic Ministry – the complete delegate list is contained below.

To formally mark the visit, Mr Alfredo Rendon Algara of the Mexican National Institute of Brand Protection – representing the delegation – was presented with a commemorative plaque donated by Walsall Town Council, by John Aspinall, joint executive chairman of Walsall Print Group.

Thanking Walsall Print Group for the visit, Mr Alfredo Rendon Algara said: 'Branding is very important to the Tequila industry and we are grateful for this opportunity to see the process involved in the production of labels. We

are most impressed with the quality of the Walsall operation and its ability to offer superb labels and brand protection.'

Commenting on the visit, Walsall Print Company's sales & marketing director, Craig Monks, says: 'It is a tremendous honour for us to host this delegation as it underlines just how globally-recognised we are for the quality of our label printing and the protection of brands against counterfeiting and forgery.

'We have a wealth of experience in working closely with distillers throughout the world, and are only too aware of the importance attached to top brands such as those of the Tequila producers that are with us here today.'

Walsall Print Company is one of three companies that make up Walsall Print Group. In addition to printing labels and packaging, the group offers a wide variety of security printing services through Walsall Security Printers.

List of Attendees at Trade Delegation

Mr Floriberto Miguel Cruz	Chairman of the CRT Project Committee
Mr Rodolfo Monarque	Lawyer from the CRT
Mr Alfredo Rendon Algara	National Institute of Brand Protection
Mr Abel Gomez	Spanish Offices of CRT
Mr Maurilio Achutegui	Tequila Producer
Mr Filiberto Pulido	Director of 'Tequilera La Magdalena'
Mr David Ruvalcaba	Tequila Producer
Mr Gilberto Cortes	Tequila Producer
Mr Arturo Armenta	Brand Owner of 'Industrializacion Integral del Agave'
Ms. Monica Loyo Ituarte	International Affairs – CRT
Mr Luis Caro	Tequila Producer

Image recognition system optimised for print

Industrial Automation Systems Ltd. (IAS) has launched a sophisticated new systems-based approach to image recognition and verification, that can determine errors on a wide-range of different production units against a determined image ideal.

The Accu-pac IVC (Integrated Verification and Control) is a modular system that has been developed to quality check high-speed labelling and packaging applications. IAS claims it is also suitable for any production process that requires verification that a particular image-related operation has been carried out successfully, such as coding, sealing, stamping and assembly.

Unlike 'pre-set' image recognition devices, the Accu-pac IVC system uses an operator-controlled touch-screen and new image requirements can simply be 'taught' into the system and saved to a code. Production line changes, including different pack sizes and new labels designs, can be set-up in seconds. It also has options and parameters for any rejected items, such as reject a single item, reject in batches, or pass within pre-determined tolerances.

Accu-pac IVC uses a combined colour/pattern head, or multiple heads, to learn and verify that a required design is present during the production process. Links to a machine-based encoder ensure that the design is verified at the correct production position and also generate an auditable trail of production information. This data can be fed into overall management control systems to show total throughput and numbers inspected, passed or rejected and can assist in identifying fault patterns.

Response time for verification and action, such as pass or reject, is under 4 milliseconds which means the system can cope with extremely high machine running speeds.

Flint introduces UV offset ink System for Synthetics

Flint Ink has introduced Matrixcure-NP UV ink, an energy-curable offset UV system that offer superior adhesion and scratch resistance on a wide range of plastic and other non-porous substrates.

Matrixcure-NP ink systems will soon be available in process and Pantone colors. Substrates that accept Matrixcure-NP include holographic, metallic, security foils, metalized board, lenticulars, polyester, polystyrene, polypropylene, polyethylene, olefins and vinyl.

EPDM rollers are recommended when running these inks. Clean up is easy with UV press wash. Matrixcure-NP inks are also environmentally friendly, featuring no VOC's and low odor.

Technology

Arca launches Pharma wrap

Arca Etichette has launched a wrap-around labelling system for the pharmaceutical industry. ASVIALS is a modular system to apply self-adhesive wrap labels onto different sizes of vials, and on cylindrical products with a small diameter (min 10 mm, max 43 mm).

The modular system has a stainless steel base, with lateral box for the electrical plant and the electronic components. The supply device is a hopper and a driven star-shaped disk, shaped according to the structure of the product. The disk is kept in phase with the conveyor by an electromagnetic clutch with reset on a single position on 360°.

The chain conveyor, designed for irregularly shaped products, is manufactured with plastic, shaped idle rollers, and jig locator rollers. The labelling system is an L 150 unit with production capacity up to 100 metres/min, with a wrapping unit made of soft 'anti-sliding' material (thickness 10 mm) and equipped with independent motor.

The delivery is in off-line configuration, with a stainless steel collect tray. An in-line device can be developed as a specific project. Options include safety doors; visual/acoustic warning and automatic ejection when necessary; thermal transfer printer to set variable data (deferred print-apply); quality assurance station. **No.208**

IBM adds impact printers to range

IBM has announced an addition to its line of impact printers for manufacturing, transportation, distribution and retail applications. 'When compared to laser printers of comparable speeds, the total cost of printing (TCOP) associated with these impact printers can be as much as 40 per cent less than the TCOP of laser printers,' according to the company.

Speed of the IBM 4247-V03 is up to 1,100 characters-per-second (cps)/500 lines-per-minute (lpm). The 4247 is capable of supporting two straight paper paths for reliable paper feeding and forms loading to help increase printing options and productivity. **No.209**

Strategic alliance covers N America

Franchise Services, Inc. (FSI), parent of Sir Speedy and Pip Printing, and Pitman Company, announced a strategic alliance naming Pitman's Printnation Division the single-source solution provider for the company's 1,050 franchisees nationwide.

Through the alliance, Sir Speedy and PIP Printing franchisees have 24/7 access to the graphic industry's largest equipment and supplies resources for digital and traditional prepress and press requirements, with the advantages of FSI's national account status.

'Our alliance with Pitman, gives Sir Speedy and PIP franchisees a proven and reliable source of solutions for their production needs,' says Don Lowe, CEO of Franchise Services, Inc. 'It fits into our ongoing strategy to expand the options our franchisees have to help them operate efficiently and serve their customers even better.'

At the Printnation.com website, Sir Speedy and PIP Printing franchisees will be able to order a wide spectrum of products including premium offset, digital and specialty cut papers, inks, films and plates, as well as computers, ink-jet printers, design and production software.

'We're very pleased to have this opportunity to work with Sir Speedy and PIP Printing franchisees across the country,' noted Dennis Hays, president, Pitman Printnation Division. 'With Printnation's easy-to-use ordering system, our tremendous inventory and Pitman's strong national distribution network, we're geared to provide fast turnaround with the right solutions for every franchise location.'

Franchise owners can log onto the Printnation website through the Sir Speedy or PIP Printing websites to place orders. **No.210**

Holographic Micro-embossing

Silver Holographic has designed a low cost, desktop super narrow web hard holographic micro-embossing machine. Called 'Fusion Baby 2' the system caters for the increasing demands of label, foil and hologram producers that require to lab test films and foils prior to large scale production. The system is also ideal for producing short runs of security holograms and decorative holographic labels and foil as well as being an indispensable tool for trials and pilot runs.

Cost is under $12000USD/ Euro 12500. Maximum web width is 4.5" (115mm) and maximum 'live' embossing width 4" (102mm).

Mark Dicker, MD of Silver Holographic said, 'This embossing system can be used to emboss registered holograms or continuous 'wall paper' images, patterns and designs, and because of this it's a great way for label printers and converters to enter the world of holography.' **No.211**

SPARK/DFS offers all-digital solution

The SPARK/DFS, a joint production of Matan Digital Printers (2001) Ltd of Israel and Allen Datagraph Systems, Inc. of New Hampshire, is an end-to-end digital solution that delivers roll-to-roll or roll-to-sheet output for pressure sensitive labels, decals and industrial markings.

The SPARK thermal transfer print engine is the latest development of Matan, a world leader in large format four-color thermal transfer printing. It offers 400DPI one-pass four-color printing in process and spot colors. With output rates up to 37.7 MSI (23 m2) per hour, the SPARK offers productivity, economy and versatility that is ideally suited to a significant range of short run imaging requirements.

The DFS Digital Finishing System was developed by Allen Datagraph, an industry leader in digital cutting technologies for flexible materials. It combines laminating, high-speed digital die cutting, and the ability to strip, slit and rewind or sheet finished output. Featuring Allen Datagraph's patented SmartMark optical registration system, the DFS solves the print-to-cut registration problem.

By eliminating film, plates, cutting dies and make-ready on press, the SPARK/DFS can be used to produce small orders, samples and trial runs without expensive set-up charges and offers the freedom to change substrates and inksets quickly.

Thermal transfer ribbons are available in process color (CMYK) sets in permanent resin, wax-resin and dye sublimation formulations. Permanent resin ribbons are also available in 23 popular spot colors – including opaque white and metallic gold and silver. When printed onto exterior grade films, the permanent resin pigments are rated for 4-5 year exterior weatherability without top-coating or laminating.

'The productivity and cost-effectiveness of the SPARK/DFS are absolutely compelling,' said Kathleen Stillman, Matan's director of Sales and Channel Development. 'Here are some quick examples: produce 1,000 2"x 3" 4-color labels in less than 15 minutes for less than $80 total; or 10,000 one-inch 2 – color labels in less than 30 minutes for less than $100. You can't get through pre-press, plate-making and set-up in less time or for less expense. The digital revolution has finally arrived for pressure sensitive converting.'

Matan Digital Printers (2001) Ltd has tackled the tough challenges in digital imaging for more than ten years. They were among the very first to commercialize, successfully, grand format inkjet for billboard printing. e No.213

Sentega claims breakthrough

Sentega Holding bv, the market-leading manufacturer of customised self-adhesive products in Europe, has achieved a major breakthrough in the search for a flame retardant that is free of environmentally damaging and internationally restricted components, such as bromide. The breakthrough compound is now applied as a coating for most substrates used by Sentega.

As well as receiving the approval from major automotive suppliers, who apply their own rigorous tests, Sentega has also had confirmation that it meets FMVSS302 criteria – the global standard for car interior specifications.

Sentega's Advanced Label Technologies business, which leads the commercial application of this solution, has received the results from an independent testing laboratory confirming that the coating meets the requirements for flame retardancy. e No.214

Label life

Inking system supplied

Exflexo Products is pleased to announce the installation of a 7" quick change inking system complete with three doctor blade assemblies at Central Missouri State University, Missouri for use on their 800 series Mark Andy press. Dr. Mark Rankin, professor of Graphic Arts Technology Management, states, 'The unit works great and will be fantastic for teaching purposes. The screens in our first job printed beautifully.

Fox Valley Technical College additions

Fox Valley Technical College (FVTC), Appleton, Wisconsin, has installed a BST Genius Digital web inspection and process management system on their new PCMC Avanti wide web film press. The system will provide students with the opportunity to learn and use the very latest technology in web inspection and on press process management.

'We're very grateful to BST PRO MARK for such a fantastic tool,' said Steve Utschig, Fox Valley instructor. Enercon Industries has also supplied a Universal corona treater and Compak 2000 power supply. This capability will allow FVTC to run paper, film, foil and metallized film materials on the press.

Benny Landa awarded

Benny Landa, founder of Indigo and now strategic advisor to HP chairman and CEO Carly Fiorina, was awarded the Edwin H. Land Medal. The Land medal, jointly awarded by the Optical Society of America and the Society for Imaging Science and Technology, honors pioneering and entrepreneurial creativity.

In memory

Brian John Monaghan, age 34, former president of International Holographic Paper (IHP), PA, passed away at home on July 20, 2002 from rare cancers. The International Hologram Manufacturing Association honors Brian's memory with an annual award, The Brian Monaghan Business Innovation Award. The Philadelphia Paper Cordage Association will honor Brian's memory with a scholarship award to an applicant that has high standing grades and is in need of financial assistance for college.

Prime UV named winner

Elinor Midlik, president (middle), Prime UV Systems received the 2002 Harold W. Gegenheimer Award for Industry Service on behalf of Prime UV Systems at the Annual Conference of NPES – The Association for Suppliers of Printing, Publishing and Converting Technologies October 28 in Napa, California.

Gravure Person of the Year

Peter Daetwyler, president of the Max Daetwyler Corporation, received the 2002 Gravure Person of the Year Award from the Gravure Association of America. The award provides recognition and honor to outstanding individuals who have contributed unselfishly to the advancement of gravure in the United States and internationally.

100th Anniversary

Yazoo Mills Inc recently celebrated its 100th Anniversary at the company's New Oxford, Pennsylvania facility. Yazoo produces cores for the tape, label, and packaging industries, throughout the United States. The company was founded in Yazoo City, Mississippi in 1902 and in 1936 moved to Pennsylvania.

MACtac Market

Log onto www.MACtacMarket.com for the opportunity to save money. You'll find highlights on price discounts on a wide range of roll label products in converted or bulk format from MACtac Printing Products.

Appointments

AET Films

Terce Henriquez

Vice president of Global Label Sales.

Initially, he will lead a team dedicated to developing the company's TOppCure(tm) Labeling System, a new, patented process that uses an innovative modified cut and stack labeling technology to provide a pressure sensitive look.

BST PRO MARK Expands Sales Team

BST PRO MARK continues exapansion of its North American sales force with the hiring of three new sales persons in the past month – Jim Hughes, Norm McGahan and Dean Hollenbeck. Jim Hughes, based in St. Louis, will handle a seven state area from Iowa to Texas. Dean Hollenbeck handles the North West US and Western Canada, and is based out of Northern California. Norm McGahan handles the South West US, based out of Los Angeles.

Dienes Corporation hires Sherex Industries

Sherex has been working for Dienes since early 2001 in Ontario, Canada. But this past September their territory was expanded to Nova Scotia, Canada. Sherex is equipped to sell Dienes' knife holders, knife positioning systems, and knife grinding systems.

Rena Brown (above) Alison Baumach (above)

Harper Corporation of America

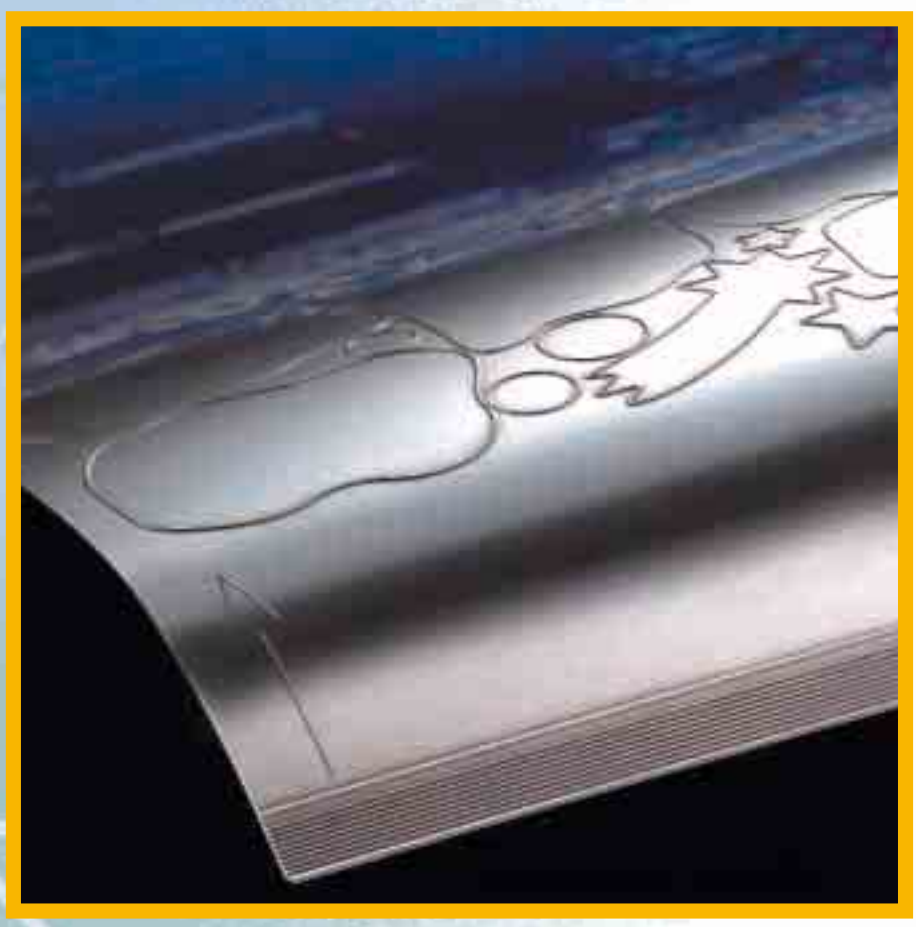
Craig Worman

Technical account manager for narrow web flexographers in central US.

Two new Technical Lab Analysts have also been added to their Graphic Solutions staff in Charlotte, NC and Green Bay, WI. Rena Brown will provide technical support for the Charlotte, NC facility. Alison Baumbach will provide technical support for the Green Bay, WI facility.

At the Annual TLMI meeting held in Henderson, Las Vegas, Roger Pellow presents Mike Dowling with the check worth $12, 000 to go to the TLMI scholarship fund.

Corrections from L&L Oct/Nov 2002: Page 25, the name under the quote should have read Ed Dedman not Ed Dedma. Page 26, headlined 'Digital definition from film', please note the company name is Cortron and not Cotron.



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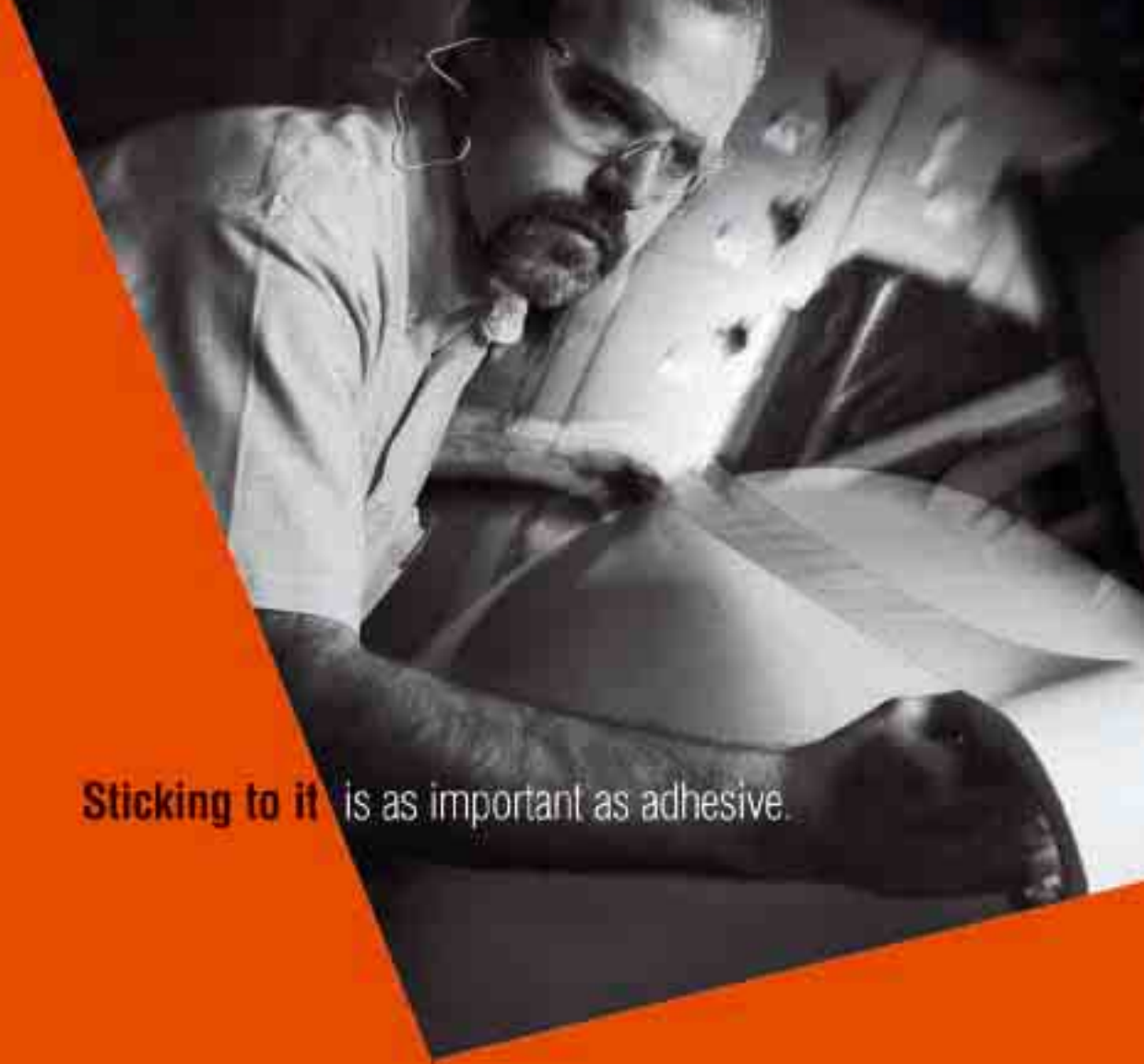

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