Labels & Labelling

World of labels & narrow web

Oct/Nov 2002 Issue 5 Volume 24

Labelexpo Americas Special

LABELEXPO AMERICAS 2002

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Leader

Labelexpo Americas 2002 was a triumph in more ways than one. First, it showed a renewed confidence in the future of the US labels converting industry after the hammering it has taken from the economic downturn sweeping North America. Real business was done at the show, despite the fact that numbers were down over 2000 (fewer 'tire kickers'). There could be no clearer symbol of this new resolve than the reaction of converters to the anniversary of the 9/11 Twin Towers horror, which fell on the middle day of the show. Few who were present on that Wednesday will forget the moving oration, pipers lament and the three minute silence at 12.00. As one exhibitor commented, this moment was like the bursting of an emotional dam. The anniversary had come and gone, it had been duly marked, there had been no terrorist outrage and the feeling was 'now let's get on with our lives.' There were more than 4,000 visitors on the day and 12,000 thru the show.

In terms of technology, there were major developments: PCMC showed a fascinating hybrid of CI and in-line press design on its ground-breaking Evolution press; Mark Andy – as well as launching a new workhorse press line – added a laser die cut unit to its digital/conventional press; the new Goebel-Drent/RDP Marathon alliance showed a revolutionary take on narrow web offset design with their variable sleeve system; Omet showed a new gearless press design; Nilpeter launched the FBZ press, the first practical result of the marriage of the Rotopress and Nilpeter design teams. Elsewhere we saw rapid evolution in laser die cutting, a host of new materials including monofoils and flexible packaging, and of course, the big talk of the show, the implications of the acquisition of MACtac by UPM (Raflatac). The rapid pace of globalisation in our industry – and the opportunites as well as threats it presents – were layed out in a ground-breaking keynote presentation from Avery Dennison's Christian Simcic, which we reproduce in this issue of L&L.

> "There could be no clearer symbol of this new resolve than the reaction of converters to the anniversary of 9/11"

Andy Thomas
Group Managing Editor

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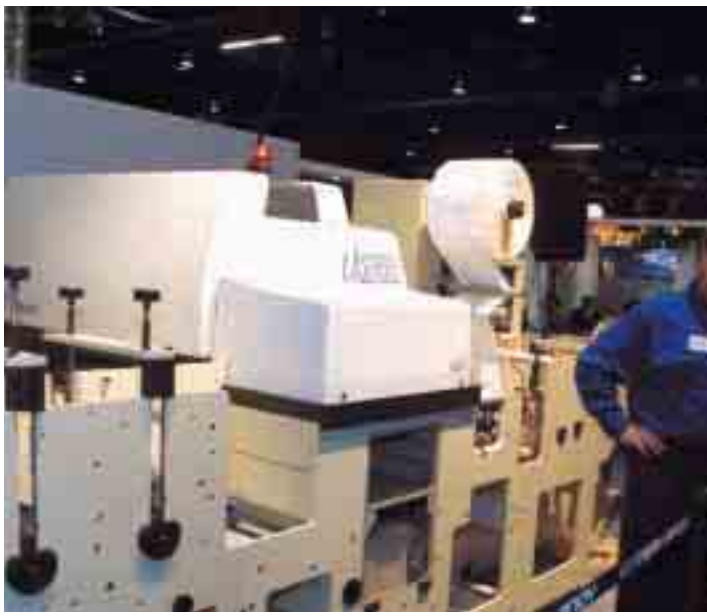
LABELEXPO AMERICAS 2002

Inkjet imaging module on Mark Andy 2200 press



Las-X laser die cutter followed by matrix rewind

Labelexpo Americas 2002 was a great showcase for exciting new press technology developments. In the first part of L&L's review of the show, **Andy Thomas** reports on new digital printing systems and breakthroughs in flexo and offset press design

Digital Presses

This year's Labelexpo Americas 2002 was an exceptional show in terms of new technology developments in the narrow web press market.

Starting with digital printing and converting, huge interest was generated by the first showing of **Mark Andy's** Digital Technology (DT) press, which integrates a multi-color inkjet imaging unit into the body of a standard 2200 flexo press.

Not expected however, was the incorporation of an in-line laser die cutting unit, supplied by Las-X, and the announcement at the show that Mark Andy is now the exclusive OEM for the Las-X 'Laser Sharp' unit in the label, packaging, and security markets.

The DT press at the show incorporated an array of four (CMYK) UV-cured inkjet heads, although this will be expandable to six colors (adding Orange and Green). Running speed is up to 80 feet (24 metres) per minute and the press has been tested on a wide range of substrates. The UV-curing unit is ▶

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equipped with a water cooled counter roller that enables printing on heat sensitive materials. Imaging resolution is 300dpi, but three bit grayscale per spot - or eight levels of grey per spot – can be achieved by varying the droplet sizes, which enhances the apparent resolution, which Mark Andy says is equivalent to 150 line screen flexography.

Mark Andy president John Eulich emphasized to L&L that users of the DT press will not be tied to one consumables supplier. 'We are now developing several sources of inks, and customers can go to these vendors directly.' Three ink companies are believed to be involved in the program to date. A European beta test press now being commissioned at Strålfors in Gothenborg, Sweden, with the first US beta site to be announced in November.

Interestingly, development work has started on a 26in wide version of the inkjet imaging module, which would allow it to be inserted into a Comco MSP press.

The print heads are being developed by Xaar licensee Toshiba, which has just invested $18M in R&D at its Japanese HQ. Rob Haak, whose company Dotrix integrates the digital print head for the Mark Andy DT press, explains that this can only result in higher speeds and resolutions in the future. 'Currently the speed of the heads is 24 metres/minute, but that could double.

Chromas continues to push its in-line digital/conventional print systems, showing once again its Argio single color UV Ink Jet in-line with UV Flexo and UV Rotary Screen, running at 100+ ft/minute at 600 dpi.

Hewlett Packard, fresh from its acquisition of Indigo, launched into the US the ws4000 digital press and announced the sale of seven machines to Flexible Technologies in Utah, Imprimerie Ste-Julie in Quebec, Jonergin Pacific in the Napa Valley, Lithoflexo Grafics, Salt Lake City, MPI Label Systems and Tapp in both Napa and Vancouver. Randy Kocher, president of MPI Label Systems, was on the HP stand and explained to L&L why he purchased his ws4000. 'I was happy to order the machine because it had been beta tested and the reports I hear were good. We will use the system for short runs of unique labels, particularly for vintage wine. The quality of the ws4000 is actually better than flexo, so we can put the longer run jobs on the flexo presses and shorter runs on the HP.' (For full report on the European beta site for the ws4000 see p. 28).

HP Indigo's Series 2 printing process not only allows up to seven colours to be used but has the potential to match conventional press speeds by ganging up 'one shot' digital offset print stations. The ws4000 prints up to 16 meters a minute in four

Omega QC330 converting unit on-line with HP ws4000 press

colors, but Indigo has already demonstrated four units ganged up on its 'Publisher 8000' commercial print press, delivering speeds up to 64 meters/minute.

A digital print finishing solution was demonstrated by **Omega Systems,** which premiered its Digicon QC330 line. (Nilpeter has apparently gone back to the drawing board to work on a new finishing line, abandoning the unit seen at Labelexpo Brussels last year). The QC330 runs from inspection table to guiding table/splicing area, and incorporates cold foiling, UV varnishing (hot air drying is an option), re-register semi-rotary die-cut, slitting and rewind. It can operate on, or off-line with the ws4000 press. A laminating tower is optional. Later in the show, Rotoflex announced it would develop a converting solution for digital presses.

Also of interest on the digital front was the VP2020 Digital Color Label Printer from **VIPColor Technologies.** Powered by a Hewlett Packard inkjet engine, the VP2020 allows on-demand label printing with desktop converting options provided by Austik Technology. Austik's Diamond 6 integration package takes printed labels from the VP2020 via a loop sensor which regulates in-feed control, then laminates and registers the print to a die-cut module. Typical applications might include color-coded labels for shipping containers, fully-colored expiry date labels, or short runs of electrical parts labels incorporating illustrations of the item. The VP2020 has a print resolution of up to 600 x 600dpi, a 6in print width and will print on a wide variety of paper and film label stocks.

Before leaving the digital print arena, we should note the continuing advances of laser die-cutting revealed at the show, where as well as the Las-X system on the Mark Andy stand, ▶

Cartes laser die cutting unit in action

Cartes Equipment launched its Laser 350 system.

The 350 series machine on display uses a CO2 semi-sealed laser system to generate a cutting speed up to 400 meters/minute on a working web width of up to 330 x 330 mm depending on materials and format. Cartes' Maria Grazia Panzani points out that filmic substrates actually cut faster due to utilisation of the 'melting' effect. High resolution cutting is achieved down to a claimed 0,066 mm (1/5000 of working area), with the possibility to select different power levels on the same label. 'You can have up to eight different options on the same label, for instance simultaneous die cut plus numbering,' Panzani tells L&L.

On the Cartes stand Mark E Mader, president of Aptech Graphics, was confirming purchase of a 350 system to run alongside his HP Indigo ws4000 digital press. 'This combination opens up great possibilities,' Mader tells L&L. 'Hewlett Packard purchasing Indigo vindicated my belief in the Indigo technology, particularly its print quality in the face of a lot of sceptisism in the industry. This is the way of the future. The web width and speed of the Cartes system was just right, as was the very easy to use interface – it takes less than five minutes to change over between substrates. We'll also be using it to produce production prototypes.'

More surprises

PCMC sprang a surprise with a completely new approach to flexo press design with the first showing of a print unit from its Evolution press – a hybrid of Common Impression and In-line technologies the company promised when last interviewed by L&L (see www.labelsandlabeling.com).

Evolution uses a radical print head design called Deck x 2, where a single impression cylinder operates in-line between two color decks, allowing for an extremely short web path of around 10.5ft thru a 2-color module. As in a wide web CI machine, the substrate is held on the drum during printing, which is particularly effective for holding register on thin, unsupported film. PCMC's Andy Gillis tells L&L that register tolerance is just +/- 3 thou, 'basically there's always registration between two print decks.' Plates are mounted to a scribe line and the servo-driven cylinder indexes the plates to register before printing begins.

The deck design is modular, allowing additional print modules and converting options to be added, and PCMC says this 'rack in-rack out' design means changeovers can be accomplished in under 30 minutes for 8-colors.

The press will be available in web widths of 18" (457 mm), 22" (559 mm) and 26" (660 mm) with infinitely variable repeat and a claimed repeat accuracy down to three decimal points.

PCMC's Xtreme dryer technology has been incorporated as standard, allowing printing speeds up to 750 ft/min, although UV will be offered as an option. A moveable screen unit can also be specified.

PCMC Deckx2 print module. Note CI drum between two print decks

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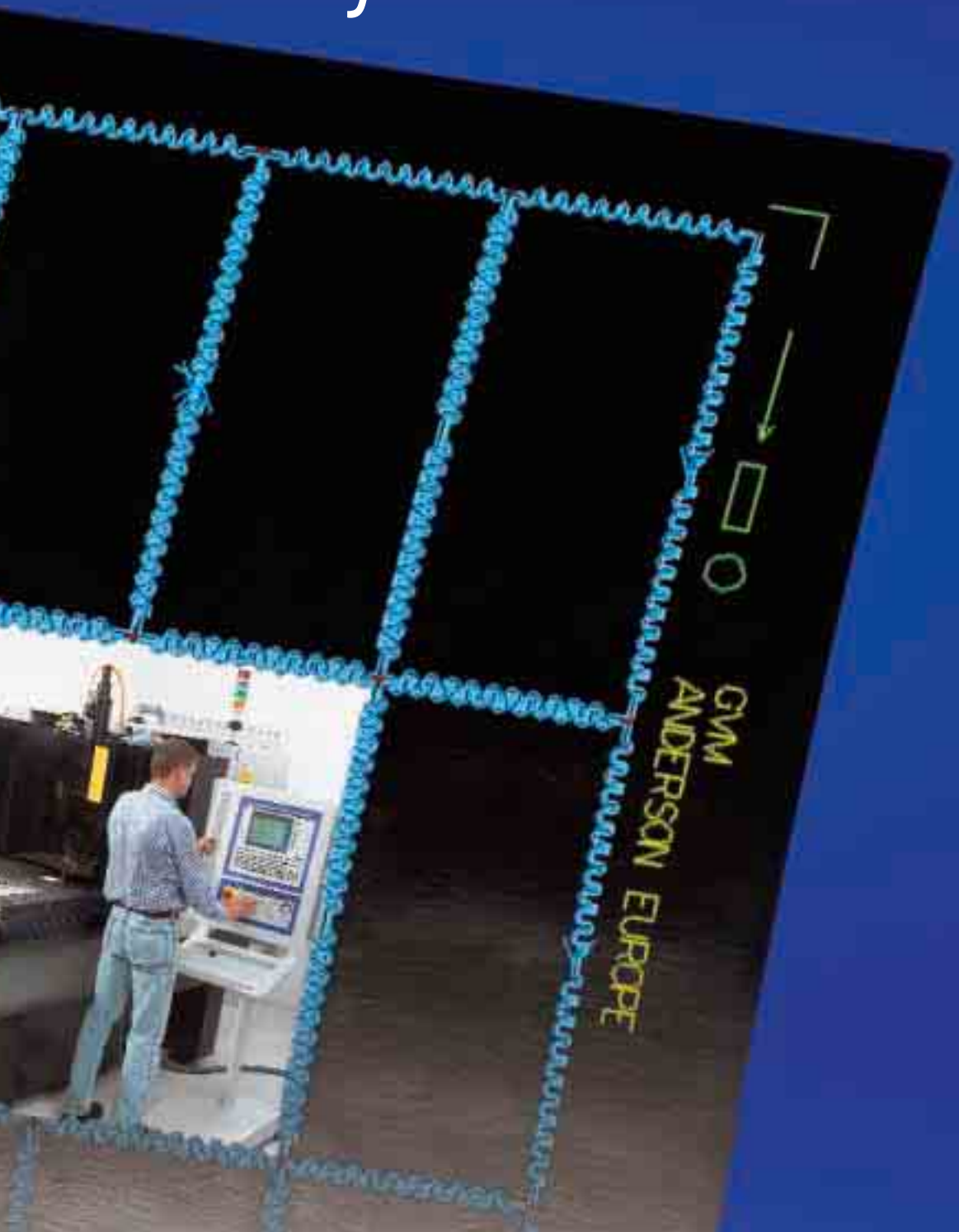

A 10-color 26in Evolution press has been purchased by Prairie State Group of Chicago. Dan Doherty, VP operations, commented, 'We looked at other presses, but the Evolution really had technical innovations unprecedented in the narrow and mid-web marketplace.' Wisconsin Label, a division of the WS Packaging group, was the beta site with an 18in Evolution press. Distribution of the presses in Europe should be sorted out by next year.

Another ground breaking technology, this time based around the web offset process, came from the **Drent-Goebel/RDP** Marathon team, which announced a marketing and technology alliance at the show (see news pages). Drent-Goebel's Variable Sleeve Offset Printing (VSOP) technology, a shaftless design which does away with the different sized inserts which make changing repeat lengths such a costly business in web offset. When changing printing size only two lightweight sleeves need to be changed. 'With this development, size variable sleeves, which contributed so greatly to the rise of flexo printing, can now be used in offset printing,' says Eric Short, president of RDP, which will be promoting VSOP technology in North America.

VSOP allows repeat length to be steplessly set from 15 – 30in (381 – 762mm). A converter could have a new size sleeve delivered in around two weeks, and changing size takes around one minute per printing tower.

VSOP was developed by Drent-Goebel in conjunction with a team of industry partners including Pechiney Flexible Packaging, Sun Chemical, Agfa, Rotec, IST (UV curing) and Indramat.

Variable offset sleeves on Drent-Goebel prototype unit

Mark Andy LP3000 'workhorse' press

This technology has the potential to change the balance of forces between different print processes in the same way that engraved sleeves are allowing gravure to make inroads into narrow web converting. The sleeves used here weigh less than 10kg and can be used with UV inks as well as solvent inks. Eric Short says that once the low cost and high quality of offset plate origination is taken into account, the VSOP press could be highly competitive on short runs. It will be targeted particularly at applications now using gravure presses, since Short says the quality from the VSOP is similar.

The unit demonstrated at the show was a prototype, with the commercial launch expected at the end of this year and the first shipment in summer 2003.

Mark Andy sprang a new press on visitors to the show. The LP3000 press is aimed at the 2200 'workhorse' market - although there was no indication that production of the 2200 will cease. The LP3000 is designed to master a wide range of label and tag applications with a range of 2 mil to 14 mil material, both water-based - with drying optimized by individual control of each station's temperature - and UV flexo. Running speed is 750 fpm (230 m/min).

Fast makeready is provided by a combination of what MA calls its Quick Load plate roll load technology, Quick Change carriage design, Quick Release ink carriage with constant turning anilox rolls and Quick Set ink and impression settings. Interestingly, Mark Andy has bucked the trend towards servos – this is a purely mechanically driven machine, which should help keep costs down.

Hardened, ground helical gears are used throughout the press, which benefits from the 'no gear marking' guarantee Mark Andy announced at the show for its 3000, 4150 and 7000 presses. There is a low web path for dual web applications.

Two LP3000 presses have been sold, one to Associated Labels in British Columbia, while another installation has already taken place at a midwest label converter currently running five Mark Andy in-line presses.

Nilpeter also had a trick up its sleeve with the first ▶

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Web path on FBZ4200 allowes 180deg chill roll contact

showing of an FBZ press - the first 'ground up' collaboration between Nilpeter's Danish and Cincinnati (former RotoPress) design teams. The 420 mm (16 3/4") wide FBZ-4200 is designed as a platform press for packaging printers, handling substrates ranging from 25-micron film to 400-micron cartonboard. Printing speed is 228 m/minute (750 feet/minute) utilizing high-capacity hot air dryers - with optional UV-curing. Rapid, tool-free changeover comes from quick-change slide-out print units with removable ink pans. An interesting design element is the chill drum at the base of a Z-shaped frame, creating a 180 degree surface contact with the web which not only assists in running heat sensitive materials, but also in keeping registration tight. The servo-assisted press features slide-in rotary screen and hot foil units – seen for the first time at Labelexpo - which can be positioned at any print position. Four presses were sold at the show, with the first going to Fort Dearborn. (Nilpeter sold a total of eight machines at the show, including an M3300 offset platform press).

Also receiving its debut was the FBX line, which significantly is Nilpeter's first mid-web packaging press, with a web width of 477 mm to 680 mm (18 3/4" to 26 3/4"), which looks targeted at the same area as Mark Andy/Comco's MSP press. Also shown was a 330 mm wide version, the FB-3300, running conventional flexo with hot air drying and a cold foil unit.

Comparing the positioning of Nilpeter's FA and US-built FB press ranges, Jakob Landberg tells L&L the FB represents 'affordable excellence' while the FA range is targeted at 'highest added value' applications.

Omet gave the American premier to its servo driven Varyflex press, which is claimed capable of converting cartons as well as flexible packaging and labels in a range from 12 to ▶

Gravure and Screen

Both Nilpeter and Mark Andy/Comco now have gravure units available for their major press platforms aimed at the crossover labels/flexible packaging/carton markets. Use of gravure modules allows converters to print metallic inks for high quality labels, flexible packaging and cartons at less cost than conventional foiling or off-press bronzing. Similarly, the use of cold seal, in-mold, heat transfer adhesives and coatings opens up a new range of commercial opportunity for converters. Applications include in-mold labels, pouches, shrink sleeves, ice cream wrappers, and most types of confectionery packaging.

Nilpeter showed their gravure module for the M-3300 at the show, mounting laser-engraved sleeves, while Mark Andy/Comco announced the addition of gravure print capabilities and the addition of a 'solvent safe' press design for the MSP range. Its gravure unit may be used in conjunction with flexo or UV flexo printing options, catering to both water and solvent-based applications.

A solvent safe MSP installation is already complete and operational in Japan, and the new system is designed to meet general US (NFPA), Canadian (CSA) and European safety standards for solvent applications.

Screen specialist Stork meanwhile, was offering an alternative route to printing metallics with the launch of its Hot Air Drying System, claimed dramatically to cut waste levels in metallic gold and silver application. The system offers a more economical solution for printing and drying of UV, water and solvent based inks for a host of specialist applications, says the company, including printing RFID or 'smart' label antennae and electroluminescent adhesives.

These applications are supported by a new generation of Rotamesh screens. With 25,500 holes per cm2, each 25 micron in diameter, the Rotamesh 405 achieves resolutions down to 95 micron, and reproduction of both positive and negative lines 'as thin as a human hair' according to Stork. Key applications include counterfeit-protection labelling applications, and clear reproduction of small text and oriental characters such as Chinese and Japanese.

Flying Imprinting stations on Gallus RCS330

600 micron. This flexibility is delivered by a gearless print unit design, electronic web control and a sleeve changing system which enables rapid and easy job changeover.

Gallus sold two of its RCS 330 servo-driven presses at the show. First seen at Labelexpo USA two years ago, the press has now gone thru beta testing at a European converter (see last issue of L&L or log onto www.labelsandlabeling.com). New at this Labelexpo was a flying imprinter station for making frequent text changes without stopping the press. In operation this requires dedicating two flying imprinter stations anywhere on the press (for example after the CMYK units on a 6-color press). The text plate is changed in the idle print station while the press is still printing at full speed. The servos then bring the plate cylinder up to press speed and switch it into the press without stopping the web. Also new to the US was a hot foil stamping module for the 330. The RCS330 demonstration saw a changeover between a pressure sensitive job running with UV flexo, UV screen and hotfoil in three colors using segmented reels, and a 38 micron OPP job with flying imprinting – exchanging Spanish for English text - at 70-80 meters/minute. The job change was completed in around 11 minutes.

Gi Due launched an entry-level version of its Combat press at the show. The Quadra is effectively a limited configuration Combat in 4 colours + 1 die station with 'very aggressive' pricing. It is aimed at start up label converters, or label printers who want to dedicate a press to certain jobs. The Quadra will be available in widths of 280 mm, 370 mm and 430 mm. It is just three meters long and less than 150 cm. deep, in any configuration and features a number of drying options.

Another very interesting development from Gi Due was a drop-in Screen printing head for the Combat press, which will replace the Stork RSI units currently installed across the ▶

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Gi Due combat integrel screen unit

range. It uses the same print unit design concept as the Flower, with the Screen head and inking unit lifting out after the print unit is opened.

Chromas also launched a self-designed rotary screen cassette which can fit into any flexo station on its Instaprep presses. The rotary screen unit uses the same Instant Change Technology system found in the printing cassettes.

The company showed a 10" 6-color Instaprep running with new 360 degree gear boxes - now standard - as well as a new patent pending doctor blade design.

Waterless offset also figured at the show, with the VIVA waterless combination press from **Codimag**, and the new **Iwasaki** TR2 UV Waterless Offset Roll Label Press being shown on the Pactek International stand. This is a 13" wide machine claimed to provide a 'low cost, most efficient way to manufacture short to medium runs of premium quality value added roll labels.' Codimag believes its platform waterless technology with hot foil, embossing and screen in combination is ideally suited for the exploding wine label market.

Even letterpress is fighting back against claims of obsolescence, as **Lintec** gave the premier to its LPM300 iTiP press. This latest incarnation of the established 300 system is equipped with a computerized ink pre-set system, eliminating the need for long and tedious adjustment and reducing set-up times. The system works through a computer-controlled segmented ink ductor system which index back and forward to deliver ink onto the plate. This also means that job data can be stored ready for automated set-up on re-runs (for a full report see p.94).

AP Maschinen also demonstrated segmented ink duct solutions for offset and letterpress printers, fitted to its AEIC 2000 (Electronic ink flow control) system, which was introduced at the show. Ko-Pack too, launched a new press, the modular 250 C-Class Version III machine, which can accept additional flexo-varnish, letterpress or silk screen units. ■

Gallus and Heidelberg

At a press conference, Gallus introduced its new management team, who have all come from senior positions at Heidelberg apart from Klaus Bachstein, the company's new CEO and long-time Gallus stalwart. As such, it provided an unprecedented opportunity to assess how the joint Heidelberg/Gallus strategists see the company developing.

Gallus' new head in the US, John Guy (ex-Heidelberg used machinery division) confirmed that 25 per cent of the company's business is now carried out in the US, 'and this needs to grow.' When asked by L&L about the synergies Heidelberg brought to Gallus in the US, Guy pointed out that sheetfed label printers were increasingly looking to move into narrow web in-line converting, 'and we want to participate in that change.' Guy also said that the new Heidelberg presence at Gallus gave his team an 'In' to speak at the highest levels at Heidelberg 'and make sure that our organization matters.' The process has already started to yield benefits as Gallus and Heidelberg sales territories are increasingly co-ordinated.

Klaus Aarestrup, who takes over from Bachstein as VP sales and marketing from former post as narrow web specialist at Heidelberg, confirmed that Gallus would stay in the labels market and would not try to become a packaging solutions provider, with the important caveat that the definition of a 'label' could be quite wide, taking into account monofoils, but NOT flexible packaging (defined as performing barrier functions) or cartons, except where labels customers were looking to move into these markets. Interestingly, however, he commented that 'real folding cartons will become a real business for Gallus in the future.'

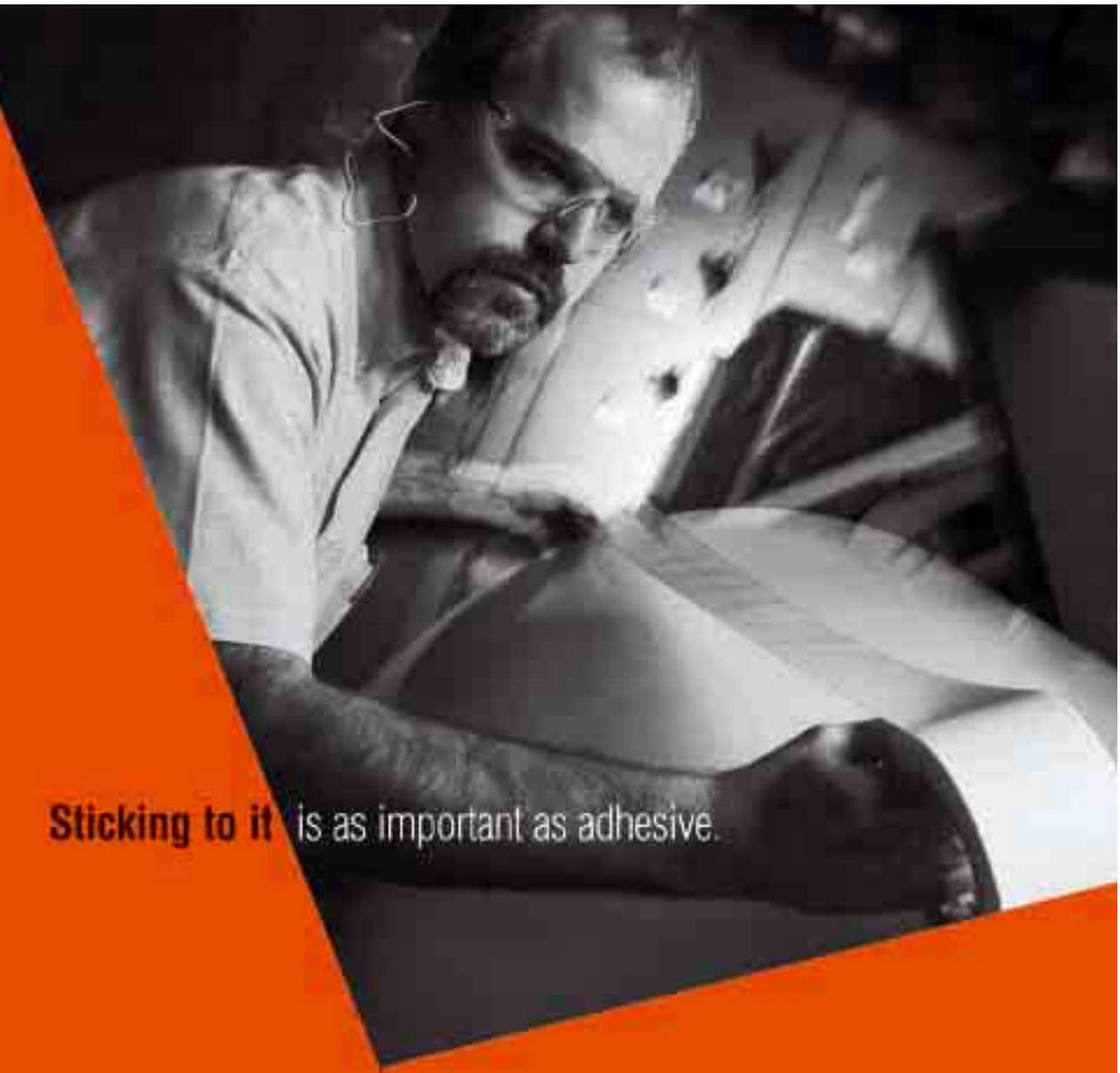
US show: 'roaring success'

The overall consensus was that Labelexpo Americas 2002 was a roaring success. Serious business was conducted on the show floor and high quality leads were generated. **Natalie Martin** reports

'We always assumed the narrow web market was narrow, but it's wider than the wide web market,' enthuses Matt McCardell, president of Graphic Systems. This was the first time Graphic Systems exhibited at Labelexpo and the first time they've entered into the narrow web market. A manufacturer of ink dispensing systems, McCardell was approached by a major ink supplier a year ago and asked to consider designing an ink dispense system suitable for the narrow web market only. That's exactly what he did. Understandably nervous and with no expectations, orders for five machines were taken at the show. 'We didn't expect anything. We just didn't realize the narrow web market was so huge, there's a million of these guys, we'll definitely be back in 2004 and we'll now also have to think seriously about going into Europe and Asia as well.'

Tom Kirtz, president of Telstar Engineering, Inc. states, 'The show was better for our company than I could ever have imagined. And to think that we nearly did not participate! Although attendance may have been down, the people we wanted to meet were there... owners and senior managers looking for something new. The quantity and quality of the leads we generated was phenomenal.'

Erv Ratazak, president of CRC Information Systems, Inc. stated, 'We were certainly pleased with the significant traffic that visited our booth. With the uncertain economic environment, we were encouraged by the fact that the business outlook seems to be strengthening and that companies were extremely interested in becoming more competitive and productive through the use of products like our new flexo label esti-



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> “Out of all the shows in the past several years, Labelexpo Americas 2002 was the best show ever”
> **Ed Dedma**

mating package.’

‘For us Labelexpo 2002 was truly one of the most exciting events with which we have been involved,’ reported CRC’s vice president of sales, Glen Forbes. ‘It provided us with the ideal forum to showcase the features and benefits of our THE graphic arts business management system.’ With more and more label printers handling fulfillment services for their clients, one of the hottest topics was the ability to create an infrastructure to handle finished goods inventory. ‘A significant percentage of the attendees that visited our booth came to us looking for a better way to manage their customer-owned and stock items.’

Niklas Olsson, global brand manager, Akzo Nobel Inks comments, ‘This time there are no real pen collectors. I feel like the visitor numbers are down but the quality is so much higher. We’re getting through to the key decision makers, more corporate, not on the lower consumable side - it’s very positive. We’ve had visitors from Europe, Latin America, Asia, and South Africa to our stand.’

‘With regards to what happened a year ago, business is still just as strong as a couple of years ago – we did feel like it was going to be a much slower year,’ says Daniel Chevez, sales representative from UV Research. Three used presses were sold at the show.

Jerry Morton, general manager, TILT-LOCK, received several commitments and John Thome, vice president of marketing, BST Promark, sold six web guiding units in the first day. ‘We weren’t seeing tire-kickers,’ he says. ‘We were seeing buyers.’ He also mentioned that they had a lot of interest from Mexican customers. Brian Chapman, market manager, Dow Corning said, ‘A lot less people were asking, what do you do, what’s new. In previous years, people came for more educational purposes, the level of contact we had from visitors was very specific or customers renewing contracts.’ Bob Trkovsky, vp of Sales & Marketing, Spartanics, was pleased to announce, ‘Our leads doubled from the 2000 show.’

‘Brisk booth activity enabled us to generate a significant volume of high quality leads, including important international contacts,’ says Mike Harjung, vice president/general manger for Arcar Graphics, a division of Flint Ink North America’s Packaging Group. ‘We had ample opportunity to talk with customers and prospects about our new Ultraforce waterbased ink system, Arcure 860 UV ink system, and Arcure Rotary Screen UV ink system, as well as other narrow web ink systems and coatings innovations.’ ■

Beverage container decoration trends

Did you know that the average person in North America 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 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 and ‘New Age beverages.’ This was the message coming from a panel discussion on beverage container during the Labelexpo Americas conference. The panel included Chris Weir, marketing development manager for Fasson Roll North America; Havis Dawson, editor of Beverage World; Mary Ellen Reis, president of Packnology; Ed Boyle, contributing editor to PFFC; Erik With, director of sales for K2 Engineering; and Mike Schedler, vp of technology from NAPCOR. ‘It’s a good time to be in beverage packaging,’ says Mary Ellen Reis. Marketing are constantly seeking creative alternative labelling ideas. Recent innovations include a folded carton to store Miller Lite beers in a special ‘fridge pack’ or downsizing drinks to fit into kid’s lunchboxes. ‘It’s all about convenience,’ explains Reis.

Converters have the opportunity to capitalize on these branding exercises. She gives this advice: 1) End users are relying on packaging suppliers to provide innovative solutions, 2) Remember, the package evolves. It never remains the same, and 3) Quality and service will remain critical factors, price is not a guarantee of future business. Within the spirit and beer markets, the ‘no label look’ remains popular. Havis Dawson states that the launch of the Smirnoff Ice ‘no label look’ took the market by storm, followed closely by the introduction of Sky Blue and Bacardi Breezer. Marketers are turning more to film labels as their choice in these markets.

Digital definition from film

One Labelexpo Americas conference session, presented by Cotron's Marc Fioravanti, looked at the price vs quality debate between Computer-to-Plate and analogue flexographic platemaking

Point light exposure, note non-symmetrical and too steep shoulders. Dots point to the light

Cotron's eXact technology, Note symmetrical shoulders with 30 degree angles matching CTP

Bank light exposure, note wide (greater than 45 degree) shoulders

Increased printed quality is driving the flexo market more than any other force today. The easiest way to gain market share is to take it from offset. The way to do this is higher quality printing. There are many aspects of flexo printing that affect quality. The current feeling in the market is that the best way to increase quality is to convert platemaking to CTP. This is a very expensive, time consuming and labor intensive conversion and is not for everyone.

There have been significant advances in many areas over the last few years that have increased the quality of a printed piece. Film and software that manipulates images on film have made great strides. Hard dot film is widely recognized as being the best film with which to make flexo plates. Flexocal and Hybrid Screening from Artwork Systems gives more latitude in image manipulation. UV inks contribute on press to better quality and new analog plates continue to be brought to market. This tells me plate manufacturers believe there is still room to improve analog plates. A few years ago point light exposure became a reality and in many sites has given longer life to analog platemaking.

Other than quality, what are the driving forces of CTP? There is the belief that time is saved, first generation images create better plates, there is a saving in film costs and labor is saved. Customers talk about having a total digital process as being a benefit as well. In reality the plates are more expensive, which offsets some of the savings in film. Instead of imaging film and then exposing the plate, you image a carbon mask on the plate, which can take more time than imaging film. Customers are then taking a sharper image on plate and using bank light exposure devices which lose some of the sharpness.

There is still a means to increase analog plate quality through the exposure process. The reason CTP plates are sharper is they control the light delivered to the plate, creating more narrow shoulders. Unfortunately bank light exposure will lessen this effect due to the scattered light present in this process. If a user can control the light in the exposure process and have film that utilizes some or all of the newer technologies on the market, analog plates can be produced that equal or in some cases exceed a digital plate.

Point light exposure began this process. A new technology that incorporates a single light source and a reflector system that eliminates dot pointing, can equally distribute UV across the entire plate – eliminating falloff. It can also control the angle of light directed to the plate with no stray light will make

a much higher quality plate. With the shoulders tuned to that of digital plates you have the best of both worlds. Controlled angle of light at a cost that is 1/10th that of CTP. Add to this digital integration of light that measures units of UV rather than time and a plate made today will be the same as a plate made 6 months from now regardless of the age of the light source.

Dot gain measurements show that this technology competes very well with CTP plates. Does this mean that this new exposure technology coupled with CTP will make even better plates? Sure it does, but this doesn't address the financial and other issues that are preventing a lot of companies from making the conversion. This technology will allow even the smallest customer to compete with those users that can afford the investment in digital. Until the cost of digital comes down, and we all know it will, there needs to be an alternative for users. ■

Harley fan takes Bike

James Kerr, foreman at P M Label Corp in St Louis, Missouri, won the XL1200C Harley-Davidson motorcycle which was on display in the main lobby of Labelexpo Americas 2002 all week. Participants in the competition toured the show to visit the booths of all eight sponsors and collected a label to complete the entry form. Then in cruel scenes reminiscent of the Sword in the Stone, ten potential winners were given keys to the bike ñ only one of which would start it. The lucky winner is already a big Harley fan, telling L&L that he has an old Sportster in the repair shop. Way to go James!

The 'Tour the Show' competition's main sponsor was Contract Converting and co-sponsors were Coates Screen, Maxcess International-Fife, Magpowr, & Tidland, Kodak Polychrome, Harper, IST America, Sericol and Sonic Solutions.

Rako betas HP ws4000 press

Rako Group, one of Europe's biggest self adhesive label converters with a €66.5M turnover and 400 strong workforce, has beta tested HP Indigo's latest ws4000 digital offset press. **Andy Thomas** reports

The Witzhave, Germany-based Rako Etiketten Group has field tested the first production version of the HP Indigo ws4000 digital press, which received its global launch at September's Labelexpo Americas in Chicago.

Canadian label producer Imprimerie Ste-Julie, which like Rako Etiketten has three HP Indigo ws2000 Presses, is the North American beta site for the press.

The ws4000 installation makes Rako the biggest user of HP Indigo presses in Europe. 'In 1997 we were the first printing company in Germany to have an Indigo Omnius digital machine for production of labels, foils and cardboards,' says Andreas Jahr, leader of the digital print operation at Rako. 'The jobs we produced were mainly economy-priced proofs for longer press runs, sample prints and very small quantities.' Growing demand for digital offset printing led Rako to buy two more Webstream 50 (now rebranded HP Indigo ws2000) presses, now with the Indichrome-6-color process capability.

The ws4000 is a the first in a new generation of HP Indigo digital offset presses, and Ralph Koopman, founder, owner and managing director of Rako Etiketten, confirms that the enhanced speed of the ws4000, along with digital offset's ability to print on a wide range of adhesive materials and flexible packaging films, clinched his decision to test the machine under production conditions. 'We believe that the future – in combination with faster printing possibilities – lies in digital printing,' says Koopman.

Series II print engine

HP Indigo's Series II print engine is a major advance on the Omnius series I technology. Not only is it faster, able to print 16 metres/minute in 4-colour mode, but it is a modular system which allows 'one-shot' print engines to be ganged together to increase speed. Thus two print engines will increase the speed to 32 metres/minute, while four engines deliver a speed up to 64 metres/minute in four colours – around the speed of a GTO conventional press.

Hewlett Packard, which now fully owns the Indigo technology, has publicly stated that it is committed to reducing the cost of consumables for digital offset machines and this should make longer runs at higher speeds a more realistic possibility.

Rako's Ralph Koopman shares this vision: 'We believe that the future – in combination with faster printing possibilities – lies in digital printing.'

Ws4000 developments continues, with HP Indigo promising a blanket cleaning station for the ITM drum that transfers the printing inks to the substrate, as well as a re-insertion facility which could be very interesting for adding full-colour variable imaging to conventionally printed webs.

HP Indigo has also added to the ink capabilities of the ws-series presses with a UV visible ink and a fluorescent yellow and pink.

HP ws4000 press at Labelexpo Americas 2002

The ws4000 has been running since May 2002. The machine uses Indigo's Series II print engine, which runs at double the speed of the older machines and with improved print quality, according to Andreas Jahr. 'We are producing at 15 metres/minute in 4-colours and 30 metres minute in two colours. Production at 16m per minute using 6 colours is also possible.'

The Indigo Press ws4000 has a seven colour capability, and can use white on the fifth station and spot colors on the sixth and seventh.

Rako has successfully tested the machine under production conditions with a wide range of materials, including PE and PP foils, white PP, glossy paper and vellum. The press has a substrate range from 60 - 250micron.

Typical run lengths for Rako's digital presses are between 5 - 10,000 impressions, depending on label size and format, while average run lengths for the company are between 50-100,000 impressions, depending on label size and format, leaving a large 'grey area' where the decision on the decoration route depends on a number of factors.

'We usually decide which route a label will take only after it has entered the plant,' says Andreas Jahr. 'What products are put on the digital press depends on factors such as the layout, run length, number of colours and substrate. We sometimes prefer to print more precise work on the ws4000 digital press due to its very high print quality. Also, the higher speed of the ws4000 is making it a viable machine for medium runs.'

The capability to print faster and with a higher print quality has persuaded some customers to change from one large order produced conventionally, to smaller call-offs, colour matched to the existing job on the conventional press. Other ▶

customers – for haircare, cosmetics and promotional labels – have gone directly digital because of the logistical advantages.

Rako has some interesting figures on comparative costs vs conventional makereadies. Digital preparation costs around €150 for each run, against €250 €500 for plates. Offset quality, time sensitive short runs produced in this way are frequently used as preliminary runs for long, offset printed jobs.

Personalisation is currently a very small part of Rako's digital press business – no more than four jobs in the five years since the presses were installed, although the company has not pushed this side of the press capability hard.

In its main press hall, Rako has a battery of conventional presses taking in all print processes from letterpress, offset and flexo to screen, with combination rotary screen and foiling capabilities. (The company has also invested in a Nilpeter gravure unit as an interchangeable cassette on an M-3300 platform press system). Indeed, the company now operates the largest number of Nilpeter presses in the world.

Colour matching

Colour matching is carried out between the digital and conventional presses, allowing jobs to be moved from one process to another where necessary. 'It's very easy to adjust colours when changing from 4-colour offset or from letterpress to the Indigo, but flexo is mostly solid colours which are very different, and we currently have to make four colour separations for the digital press,' says Jahr. 'It is also rather expensive to match spot colours with six or seven Indigo colours.'

To solve this problem Rako plans to install an IndiChrome Off-Press colour-mix station for printing special colours. 'When we test here with Pantone colours we will solve the problem,' reckons Jahr.

Finishing is carried out on two LeoMat machines, which Rako has been manufacturing for the past 13 years. Originally developed for cutting, counting and checking, the LeoMat has developed into a total processing plant for digital printing systems. Besides the die-cutting of labels, other possibilities such as laminating, perforating and coating/varnishing can be integrated, with a hot foil option to follow shortly.

The LeoMat finishing units are also used for applying the Topaz coating required to run substrates on the digital offset press, although Rako makes use of the growing range of specialist pre-coated digital papers and films from companies like Avery Dennison and Raflatac.

With this formidable digital capability, Rako is in the process of building a completely digital workflow. An interesting area of synergy within the Group is the development of e-commerce technology. The Label Management System enables customers to access the graphical and technical details of their adhesive labels directly via an Internet connection with the company's graphics department.

This makes it possible, for example, to modify and approve labels online as well as to order them or call them off, which could be a powerful tool in alliance with on-demand digital printing.

e No.225

The Rako Group

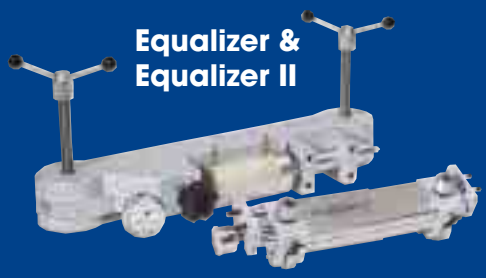
Rako is constantly looking for new business opportunities in the labels and packaging industry. Recently a shareholding was acquired in label printer Top-Label GmbH & Co KG in Alfeld an der Leine, which manufactures advertising and display labels using letterpress printing for the food and cosmetics industries as well as for trade and the service sector. Also supplied are identification labels for marking dangerous goods, for the transport and packaging industries as well as for quality assurance, among other things.

And in response to the increasingly international nature of the packaging business, Rako Group is founding new companies in the rest of Europe. It has been operating a Nilpeter press in France since August 2001, while another Nilpeter has been installed in Croatia, where label production will begin by the end of the year. At the same time, a branch of Rako Etiketten will open for business in Brazil.

Not only has Rako Etiketten expanded geographically, but it has also set up operations in different specialist packaging sectors. Acquisitions have included Folienprint GmbH (1989), Security Label Airliner GmbH (1990) in Sarstedt and Flexiket GmbH (1994). The creation of Hologram Company Rako GmbH (1995), Rako Security-Label Produktsicherungs GmbH (1998) and Rako Pharma Print und Service GmbH (1999) means that the Group now has a very broad range of products on offer, covering not only adhesive labels but also tags, flexible packaging films and sleeves, holograms, entrance tickets and anti-theft/RFID labels.

Rako Etiketten was one of the first European converters to install DuPont's Cyrel FAST thermal platemaking technology, which has reduced plate making times to a half hour while eliminating washout chemicals. Ralph Koopmann says quality is identical to that of the plate systems previously used.

Multiscorer



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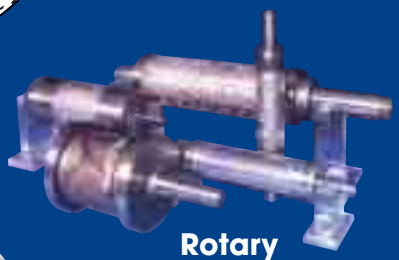

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Exceeding Expectations

Pantone Blues

Despite the fact that the Pantone system is used as the colour standard throughout the labels converting industry, **David Laycock** argues that it is handicapped by a lack of truly universal standards amongst ink suppliers.

The Pantone Colour Matching System dates back to the late '60s. Printed by litho on a good quality litho board, many editions later it is the major colour reference in the label industry.

The original concept was simple in theory: specified pigments and strength made it 'universal' across all print companies. Remember it was only litho and letterpress in the original concept.

Today, however, there is water-based, solvent and UV in flexo alone, while gravure, litho, letterpress are also used in large volumes with air drying, heatset and UV. Add to this Screen in all its modes and you can see that the situation becomes far more complex.

The central problem is that there is no such thing as a universal pigment. For example 072 Blue could be from a different source and strength for every system it is put in. Flow, curing, fineness of grind, shade stability have all to be tested before the ink is put into production. Back-up or cheaper supplies from any part of the world may be substituted.

What does this mean for the label printer? Well, it is quite a shock when the formula guide does not match the one in the book! For example when 485 is, say, 50/50 Rubine and Pantone Yellow, but in colour guides supplied by your ink maker or programmed into the balance a more realistic match is 63 per cent Rubine, Yellow and 021 Orange (all Pantone).

This is typical of using the Pantone system today. Each ink company now provides a programme as hard copy or built into the 'tied' balance where formulae have been weighed, printed and tested. Some substitute pigments or may add an extra one.

The more accurate the formula the quicker the desired shade is reached, so consult with your ink supplier!

The Pantone System is a fine universal system that is understood by many industries. However, a greater understanding of the manufacturing process used in printing inks is essential for getting the best from the system. I understand this from having spent seven years with dyestuff/pigments manufacturer Sandoz (now Clairant) and five years with Fishburn Printing Ink (now BASF) as printing ink technologist. Whilst at Field Packaging I was responsible for installing the world's first ICS ink colour matching system at a printing company.

● *The author is Ass Institute of QA and is technical manager at Olympus Labels in the UK.*

Analysis

Innovation in prod packaging and dec

A key acquisition looks set to stimulate new growth in the bottle and chain logistics markets. Mike Fairley reports on the opportunities pr Europe 2003 and the Bottle, Packaging and Canning (BPC) Show

There can be little doubt that one of the most important applications for the use of labels has always been for the decoration and branding of bottles and cans for the beverage and food sectors.

Historically, most of these label applications were of wet glue applied labels for beers, wines and spirits in glass bottles, or to cans of food. More recently, there has been a massive explosion of plastics bottles – particularly PET – which has created new demands for plastics labels and solutions for the soft drinks and other sectors.

Such demands have led to the development and growth of a wide range of additional and new methods of bottle decoration and branding – supplementing wet glue paper labels with wrap-around film, self-adhesives, cut-and-stack film, shrink sleeves, stretch sleeves and, for some very long run applications in toiletries and under-the-sink labelling, in-mould label decoration.

Plastic bottle evolution has also created considerable demand and use of coloured bottles and bottle shapes – now widely used for cosmetics and pharmaceutical products. In turn, this has accelerated the trend towards the 'no-label' look.

In the industrial field, blown bottles and containers have become the staple of a wide range of product packaging solutions for DIY, chemical and agrochemical, car care, garden centre and related applications. Such markets also demand new performance requirements from the labels used to decorate them. Chemical resistance, water resistance, longevity, UV/sunlight resistance, and much more.

Even in the field of can decoration there has been a continual change in requirement for can decoration. Beers and soft drinks for example, now widely use cans without labels, but where the high quality image is directly printed onto the metal. Even wrap-around film labels are used for some niche applications.

With these developments have also come major advances in caps, lids, closures, seals, corks, tamper-evident devices, etc., to complement the decoration and to create the total brand image.

To cope with all these new requirements in bottles types and shapes, new and changing requirements in bottle and can decoration, the wide variety of caps and seals – and the demand for twin packs, four packs, six packs, transit and shelf-edge trays, carry home packs, and the like – have come ever more sophisticated bottle and can production lines.

Some of the latest developments for example, can blow the bottles, wash, rinse, fill, cap, apply labels, shrink into trays and then palletise for shipping on trucks in, perhaps, no more than 5-10 minutes. Admittedly, this is for beverages, while short run and more niche markets in, say, cosmetics will take considerable longer.

At the end of the day it is the global brand owners and national and international retail groups that drive the demand for ever more sophisticated bottle and can filling, decorating, packaging and shipping technology. The bottle line, label and label application systems, capping and sealing, and distribu-

tion

uct decoration and supply
o-location of Labelexpo

have to constantly keep up with these demands.
e Labelexpo shows in Europe, North America and
een a considerable showcase for the latest solutions
ly, self-adhesive label materials and production
it has been more difficult to stimulate the brand
ne considerable potential of the wide range of bottle
coration technologies available today, or for them to
e major advances in filling and handling lines can
e opportunities.
ajor new development by Tarsus Exhibitions and
Group – publishers of Labels and Labelling maga-
ganisers of the Labelexpo shows – looks set to offer
nity for them to explore the whole bottle and can
ling, decoration and distribution evolution.
mber, the Tarsus Group, acquired the Bottle,
nd Canning (BPC) Show from the Binsted Group.
w for brand owners, line engineers, packaging tech-
d technicians, buyers, and logistics managers will
located alongside Labelexpo Europe 2003, which
the 24th-27th September 2003, at the Parc des
in Brussels.
the BPC show will be separately branded and mar-
e will be the facility to enable visitors to cross-over
ows. Certainly, initial response from brand owners
-located shows has been extremely positive.
that at one major venue they will now be able to see
hey need to evaluate and plan their future invest-

adhesive label suppliers. The major film suppliers' key applications are with wrap-around film labelling; ink manufacturers sell inks across all label and decoration (and carton printing) applications; the main paper manufacturers sell across all paper label face material applications.

Narrow-web presses are also now much more widely utilised than just for self-adhesive labels. Narrow web cartons, flexible packaging, etc., are interesting new markets for press suppliers. Label design and origination technology also transcends all label decorating – and carton – options.

Visitors to the BPC show will in future have the cross-over facility to explore all that these companies have to offer them in bottle and can decoration solutions, branding, and logistics coding and marking.

Interestingly, many of the Labelexpo visitors are converters whose self-adhesive labels are produced and supplied for application to bottles in the cosmetics, toiletries, health care, industrial and – increasingly – beverage and wine labelling sectors. Their customers and contacts are many of those at the BPC show.

Further stimulus

Labelexpo has done much over the years to stimulate the growth and use of labels. The co-location of the BPC show should provide even further stimulus to the world of labels, bringing label and label application innovation, product decoration and branding, and logistics label solutions to the label industry and end user.

Tarsus plans to further stimulate both groups of Show visitors by a series of key conference papers throughout the show on the latest requirements and developments in bottle and can decoration solutions, filling and label line efficiency, label use and application, logistics labelling, track-and-trace solutions, new markets and applications for labels, and the continuing evolution of global branding.

As part of the acquisition agreement, the Binsted Group will continue to use its stable of bottle, packaging and end-user magazines to promote and market the BPC Show, and to work closely with the Tarsus Group in building the show and visitor base.

Brochures, promotional material, Show Packs and advertising are currently being finalised and will be available in the near future. In the meantime, potential new exhibitors for the BPC – or Labelexpo – Show can contact Roger Pellow for advance information on stand availability, or to indicate their interest in speaking at the keynote conference sessions.

In an increasingly challenging market it is hoped that the co-location of these two key industry sector shows will keep the label, bottle, can, filling, decoration and logistics handling industries at the forefront of the relevant brand and product marketing investment programmes.

New entrant web label ink

With the in-line labels market conti offset ink and consumables supplie a range of products across all print

UK-based printing inks and coatings manufacturer Bousfield has launched into the specialist narrow web label market for the first time, with a 'one stop shop' range of inks, coatings and pressroom chemicals for the litho, flexo, letterpress and screen printing technologies used in this sector.

In addition, the company offers a range of pressroom and pre-press consumables, such as tapes, foils, films and printing plates – including Du Pont's innovative Cyrel FAST thermal platemaker for flexo applications.

The company's move into the sector is a strategic step, believing it can pick up market share by offering competitive products combined with high levels of technical support. 'Up to now our key market was commercial offset,' says Richard Edwards, head of marketing at Bousfield. 'This sector is stagnating while the labels printing market continues to expand. We are also seeing sheetfed label printers making the move towards narrow web roll printing, often using combination techniques.' Bousfield has been successful in its core markets by being able to supply virtually any product a printer may need within both the pre-press and pressroom environments combined with high levels of technical support, and believes this model could be a winner in the narrow web sector.

The company also works with manufacturers to develop products specifically for individual customers, including coatings with different finishes, viscosity or slip, or an ink to match a specific colour from Bousfield's manufacturing and development facility in Bristol.

'We have considered the needs of the label market for some time and believe that this approach will be equally successful there,' says Edwards. 'We anticipate significant first year revenues from this sector, with steady growth in subsequent years to become a major part of the Bousfield business.'

Bousfield's technical director Craig Reid has been instrumental in developing a comprehensive range of products that

narrow
ector

steady growth, another
he narrow web market with
ndy Thomas reports

e requirements of the narrow web label printer.
products in the Bousfield portfolio include several
nks which are suitable for printing onto most label
They cover all the printing techniques used in the
of labels 'and are all formulated to combine high
gth with fast drying performance,' says Reid. They
ilable in process colours, Hexachrome colours,
lours, fluorescents and metallics. The ink ranges
rflex and Sureflex flexographic inks, Letterflex UV
inks, Screenbase screen inks and a wide range of
ies.

, a £30M turnover operation employing 148 people,
ave one of the most sophisticated coating manufac-
s in Europe, which has recently undergone a £4M
programme. The company has recently invested
ssroom chemicals production, with a wide range of
om simple washes to custom-formulated fountain
PA, white spirit and press cleaners. Bousfield also
wide range of graphic supplies for both pre-press
om – from plate mounting tapes to wipes, while the
one of the UK's largest suppliers of films, plates
chemistry both from leading manufacturers and
brand of product.

also has an Electronic Imaging division, which
sultancy service on everything from Apple Macs to
o Plate and from scanners to proofing equipment.
r interest in the flexo and narrow web label market
l's ability to supply the Du Pont Cyrel FAST dry
g technology. Benefits of the dry system include

For growth thi

More than 250 delegates attended the keynote presentation at Labelexpo Americas in Chicago given by Christian Simcic, group vice president, Avery Dennison Roll Materials Worldwide, and chaired by Mike Fairley of the Tarsus Group. This two part edited presentation is essential reading for converters anywhere in the world

nk global

Innovation has been, and still is, the foundation of our industry. Yet there is no doubt that as an industry – roll material suppliers and label printers alike – are also today facing tremendous challenges.

Customer requirements for faster delivery, lower cost and higher quality are permanent. And, in today's e-commerce world, it's not getting any easier. Increased online auction activity and its likely "commodization" of labels is a looming threat.

Customers also require shorter runs due to Stock Keeping Units (SKU) expansion, customization trends, and a drive to lower their inventories. While self adhesive continues to gain share versus direct-print and glue-applied labeling, end users are increasingly analyzing the total applied cost benefits of non-self adhesive label technologies – particularly in-mold, sleeve, and shrink decoration methods.

However, Avery Dennison continues to have confidence in the industry's future. And, as the recent acquisition of Jackstädt demonstrates, we will continue to invest in building this industry. Our vision is to grow this industry for converters so we, in turn, can grow through them.

Why are we still optimistic?

Because, as severe as the current situation may appear to be, we believe this condition is temporary and transitional. We have to remember that the fundamental growth drivers of the industry remain strong and vibrant and new growth opportunities are constantly emerging.

Another reason for optimism lays in the fact that the industry has been through tough times before – and each time has emerged stronger, smarter, and even more successful.

As a great believer in learning from the past, perhaps it is possible to get some clues about how to prosper in the future by reviewing our past.

Avery Dennison owes its creation to the innovative genius of Stan Avery, who started the self-adhesive industry by solving a problem. His simple idea of a label that could stick without heat or moisture became the solution for price marking merchandise in antique and specialty stores in 1935.

Through the following decades, the label converting industry grew as converters and suppliers innovated and found solutions for countless customer needs and new applications. From the early needs for retail price marking to the 1960's boom in consumer products . . . from fruit to automobiles . . . label printers have succeeded by being solutions providers and by meeting customer needs.

We've developed and employed technologies that have enabled the industry to advance, such as automatic dispensing: making our products relevant to the packaged goods environment. Improved printing and die cutting methods have also enabled packagers to use a wide variety of ▶

> “To fuel new growth, however, it’s critical that we begin to look around the world and pick up new ideas from other markets”

shapes and materials, while innovative film materials like clear labeling have provided packagers with material that could be printed, dispensed and squeezed in many new ways.

All of these innovations came about to meet customer needs.

So where does this history of innovation lead us? Let’s take a look at the global pressure-sensitive industry today. With over 15 trillion square inches consumed in 2001, pressure-sensitive technology is now an integral part of packaging and labeling in every region of the world.

When you think of these different regions of the world it is important to think in terms of trade zones – such as NAFTA in North America, EEC in Europe, ASEAN in Asia or Mercosur in Latin America, import duties into and within these zones have a significant impact on the market dynamics and the way people conduct business.

These regions are far from being homogenous, however. For example, Eastern Europe is just emerging while Western Europe is as sophisticated as the U.S.

Over in Asia Pacific, Australia is very much like the U.S., while the Southeast Asia labeling market has been driven by the needs of the electronic industry, specially hard disk drives, but still has a lot of potential in health and personal care and food segments as the purchasing power of consumers continues to grow.

China and India are just emerging, but with respectively 1.2 billion and 1 billion people they represent a huge potential for the next 25 years, as the purchasing power of people develops and new consumers appear every day.

Indeed, you don’t have to travel that far away from North America to find significant market differences. Mexico, although currently impacted by the U.S. recession, is still growing in double digits – fueled by fast-growing purchasing power as well as the localization of label production that was once imported.

Another way to assess the maturity of a market and its growth potential is to look at the consumption of pressure-sensitive material per capita. The North American market for example, is the most penetrated in the world. Does it mean it has reached its full potential and won’t grow anymore? I don’t think so.

North America is already a very open market, where new ideas and innovations are rapidly endorsed. To fuel new growth, however, it’s critical that we begin to look around the world and pick up new ideas from other markets.

When we turn to our view global, we discover that markets don’t develop the same way around the world as new applications emerge. For example – the reclosure market in Europe has many more applications than in the U.S.

How is it possible to learn more? Industry suppliers should be sharing information about distant markets where competitive confidentiality is not an issue. Forums like FINAT or Labelexpo Europe also provide the chance to learn more about other applications and innovations. But also, as more and more converters start participating outside the U.S. market, the home market will benefit from an increasing flow of new ideas and applications.

While this may not seem so relevant to many in North America, some converters are already thinking, or may soon be thinking, about going abroad.

Timing is right, since the European market is at the beginning of a major change. With the EEC being a reality, a lot ▶

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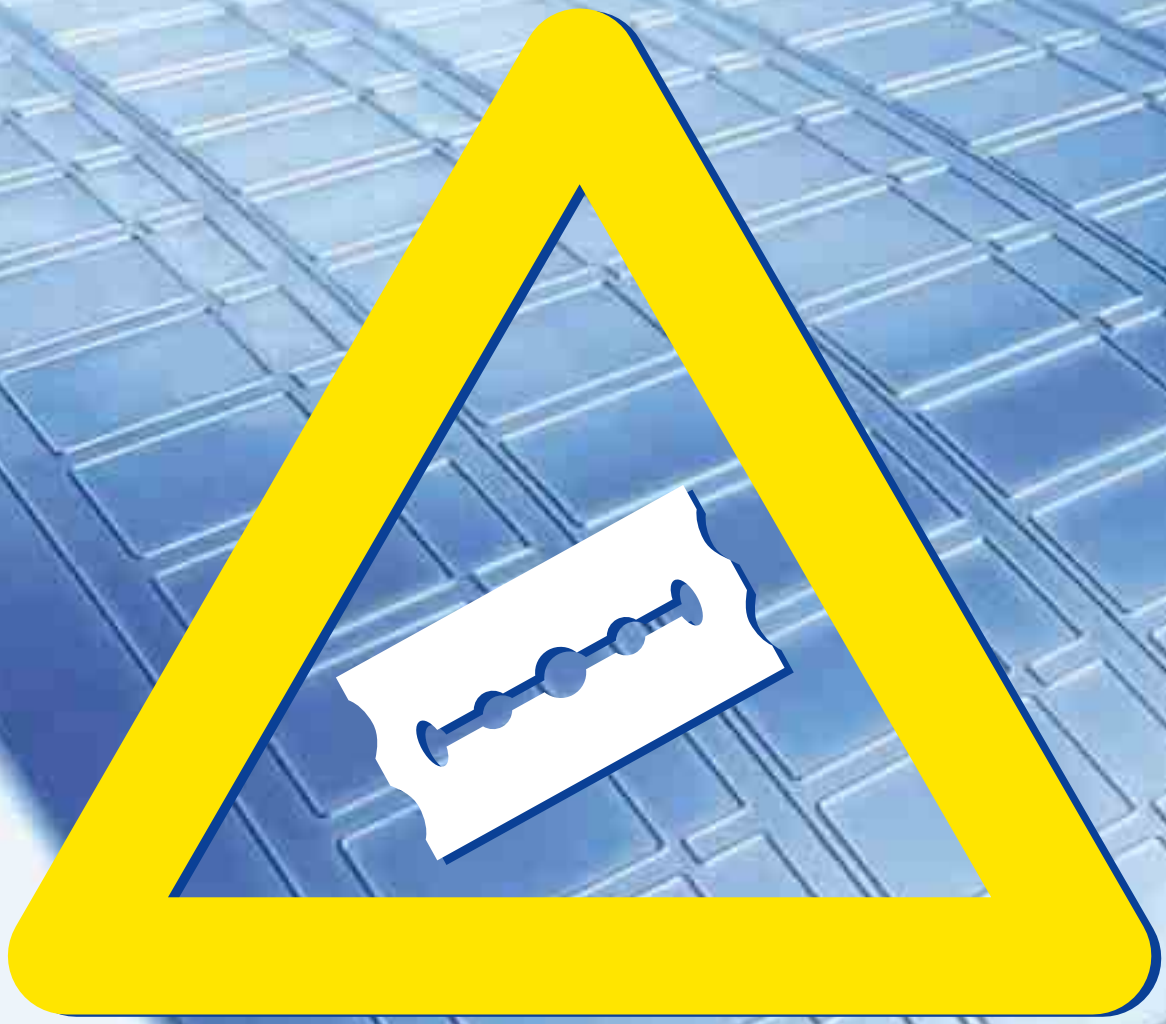

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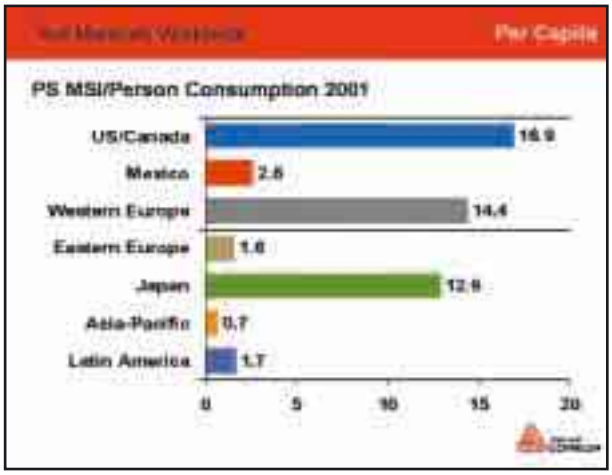
their labels and at the same time local production, shorter



of converters who previously focused only on domestic markets should now think pan-European. And these converters are no more equipped than you to face this challenge.

Many US converters may think language is a major barrier. The answer is to carefully pick your location. For example, in Eastern Europe, the older generations speak German, but the new ones, the entrepreneurs building the business of today and tomorrow are very comfortable, if not fluent, in English.

Bring printing expertise to these growing markets and you will enjoy their growth.

Today, we are experiencing high double digit growth rates in developing economies of Eastern Europe, Asia and Latin America. This is fueled by many factors including: new consumers; increased legislation mandating more information on products; multi-national consumer good companies driving for

brand awareness and recognition; and emerging computer usage that is increasingly in demand for inventory control and material tracking labels.

And in the coming 3 to 5 years we believe that Eastern Europe will continue to see growth rates in the 20 percent range, with Asia Pacific close behind. Mexico and Latin America will also present solid growth opportunities in the next few years.

These are the ‘low hanging fruits’ of the world of pressure-sensitives. But what is the situation in North America?

As already mentioned, the industry was built upon applications – bar-coded labels for inventory management, film materials penetrating the health and personal care market, postage stamps and wine labeling, all played a key role in boosting the growth of the pressure-sensitive industry during the last 15 years. The NLEA – Nutritional Labeling Education Act in 1994 also played a key role in our growth.

However, in recent years significant applications have been few. Add to that the onset of shrink labeling and wrap labeling, the usage of more complex shapes for containers, the localization of production outside North America, plus a focus of key end users on cost management versus brand building. All of these factors, plus the slowing economy, have caused the self adhesive market to decline in North America for 4 consecutive quarters.

But that should come as no surprise to North American converters. This state of being reduced to no growth, coupled with some key market dynamics, are driving new challenges for our industry.

Key challenges

There are three major challenges facing the self adhesive industry. The first two are related to the consolidation that’s taking place in the retail and distribution channel as well as through the entire industry. The third one is the globalization of the industry.

■ Let’s have a look first at channel consolidation.
Consolidation in the retail channel is driving changes in the strategies of consumer goods companies. When large retail companies such as Wal-Mart or Carrefour promote their own private brands, it puts tremendous pressure on the premium brands.

Consumer goods companies then respond in two ways:

● Packaging innovation is a great source of brand differentiation. It may become a tremendous opportunity for the industry

are seeking and driving for a standard global image for lead-times and lower costs”

if we address the needs of these companies with products like reclosures or squeezable packaging – or it may be a threat if the solution comes from alternative technologies such as shrink labeling or blisters for unit doses in the pharmaceutical segment.

● The second way consumer goods companies are responding in order to finance marketing activities and meet the challenge of private brands is to reduce costs by more productive manufacturing, lower inventories and consolidation of suppliers.

■ Consolidation activity is increasing at every level of the supply chain – end users, label converters and industry suppliers – so all of us must respond with rapid productivity gains and lower costs. While consolidation should ultimately create a more cost effective and healthier industry, it is not without challenges.

Going through a large integration right now, Avery Dennison can tell you, first hand, that supply chain and systems integrations, asset rationalization, blending of different cultures to create a new company that is closer to its customers and more suited to respond to their needs, is not a simple task.

■ Globalization is another path that more and more consumer goods companies follow in order to build brand awareness and loyalty in emerging markets while reducing marketing, production, and distribution costs.

Procter and Gamble, Colgate, Unilever and many others are seeking and driving for a standard global image for their labels and at the same time local production, shorter lead-times and lower costs.

Globalization can actually increase your market opportunity – if you happen to be dealing with the central purchasing office of a global end user and if you can help them meet their goal of improving quality and consistency of the labels. And all this, at a competitive cost, of course.

New skills

These three market trends require narrow web converters and the industry suppliers to develop or upgrade a new set of skills.

Global competencies, innovation, total cost management, speed-to market and stronger synergies across the supply chain will to different degrees be required to be successful tomorrow in the main markets we all serve.

Let’s take a closer look now at four of these key market segments and the industry skills required for each.

■ Firstly, in the branded food segment, there is a growing need for innovation.

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> “Private label brands are the fastest growing segment, forcing premium brands to differentiate through convenience like squeezability of the container and the label”

As already mentioned private label brands are the fastest growing segment, forcing premium brands to differentiate through convenience like squeezability of the container and the label or through the promise of a completely new culinary experience such as Jack Daniels sauces. Also, since September 11, the need for features that protect or increase food safety has grown significantly in American brands.

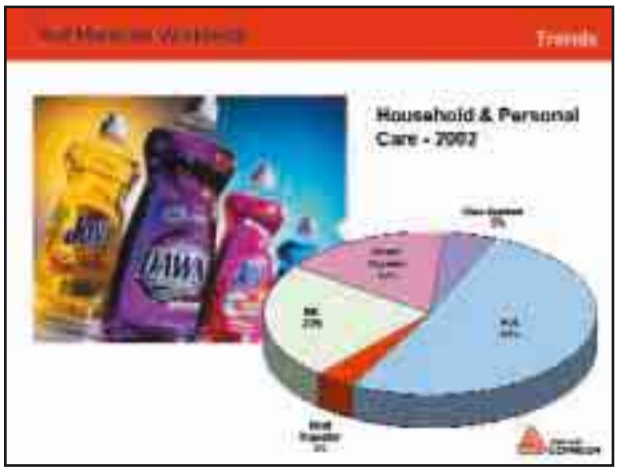
I believe that the technologies that will address these needs in the coming two to three years will be pressure-sensitive and shrink labeling, and that they will grow at the expense of glue-applied paper labels.

■ In the beverage labeling segment, speed to market, total cost management and stronger synergies across the supply chain will be the critical factors to meet the needs of leading beverage companies.

A constant flow of new beverage products with attractive packaging – such as Sobe's New Age beverages or Bacardi's new orange flavored rum – is driving impulse purchases and making premium decoration more valuable even in mature categories.

However, we need to recognize that there will be room only for minimal price premiums in this mature market segment.

A combined approach between material suppliers, printers and equipment providers will most likely be necessary to develop synergies across the supply chain and move the most mature parts of this segment.



■ Nowhere is globalization more evident and demanded than by leading household and personal care multinationals. The globalization of household and personal care brands brings opportunity for global platforms at all levels of the value chain. The ability to support global expansion with strong links ▶

and synergies across the supply chain will be critical to the success of pressure-sensitive technology.

Glue-applied labels have already declined in this market, so we now need to focus on influencing the transfer of direct-screen and in-mold labeling applications to pressure-sensitive.

■ Today the pharmaceutical industry is under tremendous pressure to manage total costs while still meeting the convenience and safety needs of it consumers.

The success of store brands is increasing price pressures for national brands. Since many product components are heavily specified, total cost management through productivity improvement, inventory and waste reduction will be emphasized in this market segment. Also, blister packaging is stealing share from labeled, rigid containers.

One consistent fact is relevant across all of these segments. The industry will only grow if it nurtures the entrepreneurship that allowed it to grow in the first place.

Entrepreneurs focus on external factors – call it 'outside-in thinking.' The slow death of any business begins when management asks, 'how can I sell more of what I make' – rather than: 'how can I solve customer problems?'

The point is that as companies grow and are successful they often forget the things that made them successful in the first place. Innovation was the basis for the industry's growth – and innovation must continue as the driving force for the future.■

Tesco specifies global silver

To further raise the profile of the Finest range of its premium own brand products, Tesco has included a specially developed, high brilliance silver ink in their latest designs across the wide range of their packaging. The specialist ink systems are part of a range of finishes developed using vacuum metallised pigments. These products have been made exclusively available to Tesco and all products can be sourced directly from Intercolor, the printing ink manufacturer recommended by Tesco.

In order to maintain consistency across the broad range of labels, cartons, pots, sleeves, and flexible packaging, Tesco has exclusively commissioned the services of Intercolor to assist as Project Manager for the supply of the finished ink products. Given the number of printers involved, Tesco took the unprecedented step of nominating a preferred ink supplier to handle several aspects of this demanding project, but most importantly, to administer the distribution logistics in order to ensure the Tesco specified products are available to all its suppliers.

Moreover, in a conscious effort to ensure print quality and consistency, Tesco requested a quantifiable method to measure the brilliance of the silver. Intercolor have developed a 'brilliance index' that can apply data to the level of reflective metallic effect gained by any printer on any substrate. Tesco have recommended that all stages within their supply chain work closely with Intercolor to ensure that print quality meets the standard, and Intercolor has been asked by Tesco to monitor, measure and report on the quality of silver, black and varnish on the foregoing packaging products.

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Flexo cartons

With margins disappearing in the commodity labels market, converters have to find added value opportunities to survive. One UK label converter has found the answer in producing short runs of cartons, in-line, on a budget labels machine. **Andy Thomas** reports

Phil Rutter (centre), with his two sons Anthony (left) and Phil Jnr

Former paratrooper Phil Rutter is the sort of man who loves a challenge – especially when everybody tells him it can't be done. 'It's all about timing, effort, attitude and having the right people around you,' says Rutter. It is this mentality which drove Rutter's family-run company, Label Innovations, to pioneer the printing and on-line converting of folding cartons on a (slightly) modified, budget label press in the face of tough technical challenges and the doubts of his suppliers.

This industry has talked for a long time about the possibilities for narrow web printers to take on the offset litho carton industry with the advantages of high quality flexo printing and in-line production, but very few have had the vision, guts and energy to follow it through. Phil Rutter's chosen route of attack was the Home Improvement/DIY sector, which is driven by short lead times and small format cartons with relatively simple designs and limited run lengths. He perceived that in-line flexo production could offer end users a cheaper and more efficient service against their existing litho suppliers, who, with their higher fixed costs, are dependant on longer runs and longer lead times.

'I went to the last LabelExpo in Brussels to discuss converting Board, but the cost of dedicated presses was ridiculous,' says Rutter. 'So we looked at how we could convert cartons on a standard label press.' Just to make things more interesting, the job he had in mind was specified with 500 micron recycled board, which means uneven caliper, uneven surface with occa-

find niche

sional debris, and a material tolerance of 5-10 per cent, against 2-5 per cent in virgin board. 'A lot of retailers who want to be seen to be environmentally friendly are now specifying recycled boards.' When Phil Rutter told his press supplier that he wanted to convert 500 micron recycled cartons, their reaction was entirely predictable: 'they scratched their heads and said it couldn't be done. They could not support us technically because we were doing something outside the press' specifications.'

So Rutter's son Anthony – who came up through the apprentice route and knows how to make a machine work – set about modifying the press, including fabricating a simple buffer before the diecut section which allowed the tension to be better controlled and tackled the problems they had been encountering with registration.

The biggest problem Phil and Anthony Rutter faced was finding an acceptable in-line rotary cut/creasing solution. They had already tried the 'single die' solution from Gerhardt, but thought the crease formed by the three 'spikes' would be unacceptable to end users used to an offset finishing solution.

Solid tooling systems had likewise been written off. 'This was a nightmare,' says Anthony Rutter. 'The problem with impact systems is the shock transmitted up the press each time the tooling hits the anvil, which makes print barring an issue. Solid tooling is also expensive for short runs.'

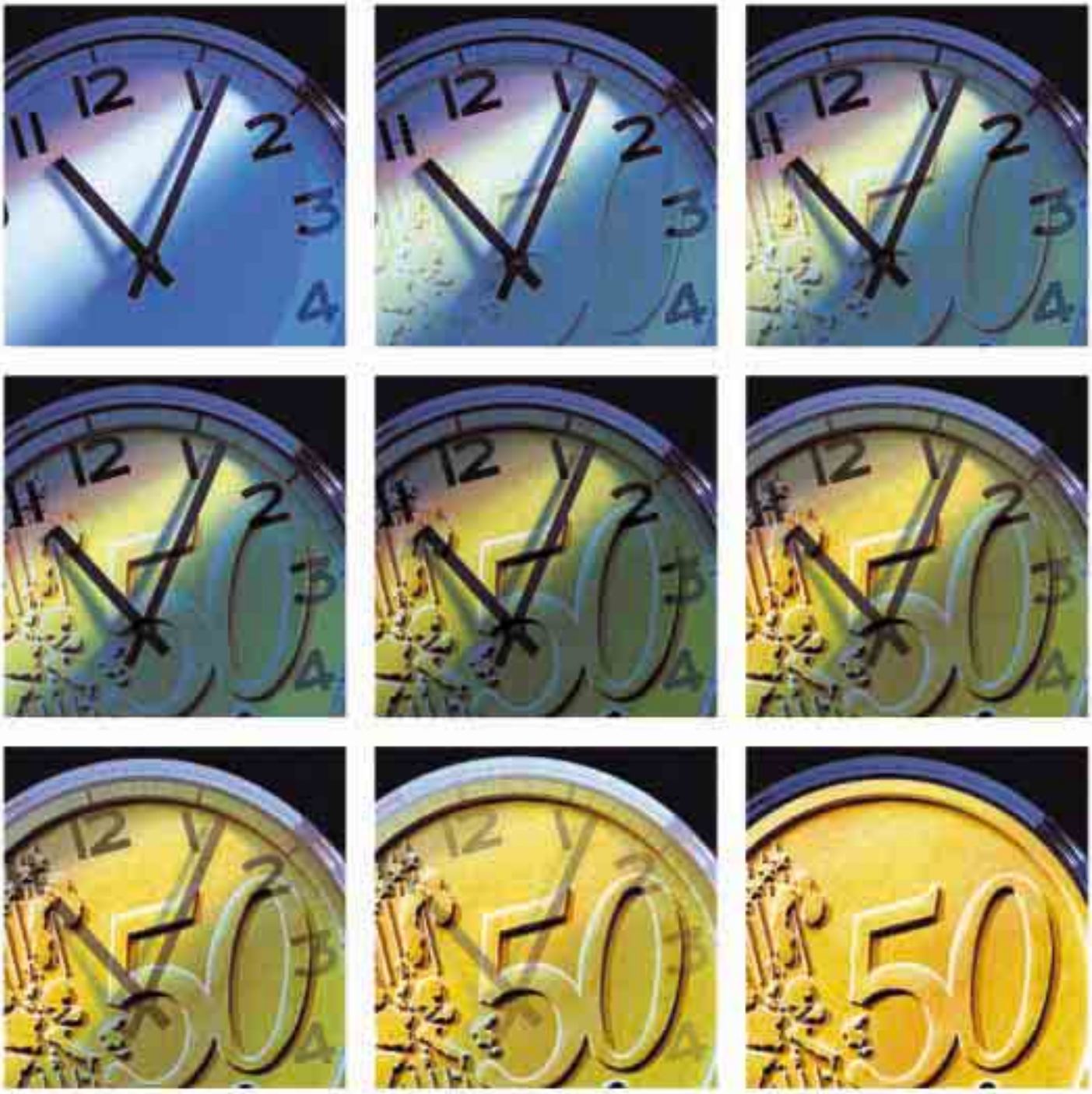
Rutter points out that Comco has succeeded in eliminated this shock on its MSP Pro Glide, but that is reflected in the price of the press at £350-400K. 'Our press supplier wanted to sell us a press with servos, but we weren't prepared to spend that sort of money. We have seen the Rotometrics system demonstrated and it will be evaluated, however it is still an impact system'.

The solution was finally provided by New Mexico, US-based company Xynatech. 'We believe we have found the answer after following up a Xynatech advert which appeared in Labels & Labelling,' says Phil Rutter. Xynatech's solution utilises plates mounted on opposing male and female snipped magnetic cylinders, which creates a 'compression' action rather than a downward 'cutting' or 'crushing' action.

It's not an easy system to set up, since the linear and cross register of one die to another must be rigidly maintained, but the results are impressive – a perfect 'offset'-like crease and no die noise.

Indeed, there is more noise from the printing section of the

press than the die stations, and it's easy to forget that we are cut/creasing 500 micron board at web speeds up to 40 metres/minute. Just to emphasise the point, Phil Rutter stands a coin side-up on the die station at this speed and it does not even vibrate. Perfect register is maintained on the press even without a web guide: 'There are 1/4mm traps on this carton and the press doesn't move half of that,' says Anthony Rutter proudly. The compression action of the dies also results in a longer die life. 'The problem with crush cutting is poor die life,' Phil Rutter points out. 'The "compression" cut avoids the rapid wear from the slicing action of crush cutting.'



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> “The next stage was to convince the customer, DIY giant Wickes, that the carton job could be switched from offset litho to UV flexo with no loss in shelf appeal”

The Xynatech male/female tools in action

Both Phil and Anthony Rutter emphasise that getting to this stage involved a lot of hard work – including modifying the die stations on the press to take the larger repeat. Also important is the ability to strip complex shapes and take the unevenly balanced waste onto a roller under the press. This in itself presented a big challenge to Anthony Rutter's ingenuity. The press line finishes with a conveyor and stacker.

Implementing the Xynatech solution was achieved at a cost of around £50K to set the system up and around £600 per tool. Two dies are needed per box shape, so with the 100 box shapes Label Innovations handles, 200 dies are required plus cylinders for different repeat sizes. But the Xynatech shims are still cheaper than solid tooling and it takes just half an hour to change a job.

Having set the press up, the next stage was to convince the customer, DIY giant Wickes, that the carton job could be switched from offset litho to UV flexo with no loss in shelf appeal. Extensive print trials were carried out, with the main issue being a delicate 'crest' device, which required particularly fine reproduction. 'We reckon we are 98 per cent of the way towards achieving litho quality with the help of specially designed aniloxes,' says Phil Rutter.

Rutter is using standard label inks to print the cartons. These are fine, he says, so long as the board is coated. The press is configured as a five-colour water base machine, with UV interchangeable between the fourth and fifth unit for varnishes or special finishes.

Particularly impressive is the extensive use of water-base flexo gold, which required Anthony to overcome drying problems. Because of its high opacity, the gold can be overprinted and not trapped. 'The litho gold by comparison was flat, with no luster and required an extra process step to compete with the flexo gold,' says Phil Rutter. Rutter saw no point in farming out the added value carton finishing work, so invested in a folder gluer (a Spanish-built Vesta 600), which allows him to present finished cartons to his buyers. It has top and bottom gluing heads for multiline gluing and a carton width capability of 600mm.

Finishing the job

'The cheaper price we could offer for flexo against litho would have disappeared if we had to pay someone else to do the folding/gluing,' says Rutter. Yet another long learning curve was involved in setting this machine up. Rutter believes the philosophy of taking over as much of the finished job as possible also has wider relevance. 'It's all about adding value. You supply pressure sensitive labels, but what does the end user do with them? Add variable information? Why not look to see if you could do the whole job – or bigger parts of it? Label Innovations now has the capability to offer a one stop shop for cartons, labels, barcodes and barcode systems.'

The move into cartons has reaped rich rewards for Phil Rutter's company. He has achieved the 'holy grail' of increasing his margins while cutting the end user's direct costs and increasing the efficiency of their logistics operation. The level of service offered is demonstrated by one order for 30,000 cartons which was turned around in 24 hours.

'We can offer short runs – half the economic run lengths of offset – with fast turnaround, and at the same time we cut ▶

Phil Rutter with compression plates

> “A lot of bigger companies lose it because nobody wants to put their necks on the line and take a calculated chance”

The folder-gluer enables Label Innovations to finish cartons in-house

one end user's costs from 7p per litho carton, to around 4.5p for an in-line flexo carton on runs of 20,000.' There has been an average drop in carton unit costs produced on the press of 25 per cent, based on a sample of more than 100 different carton styles. Label Innovations are now doing extensive print trials for blister pack applications.

Once again, this is an opportunity taken away from sheet fed litho. Their process would be firstly to print, then send out to be cut and finally varnished to allow the blister pack to work. Label Innovations are doing this now on one pass, in line, printing, coating and cutting at speeds of up to 60 metres a minute.

Rutter concludes, 'If converters don't diversify, how will they survive? Certainly not by doing easy labels where the only differentiator is price. A lot of bigger companies lose it because nobody wants to put their necks on the line and take a calculated chance.' Label Innovations will shortly be moving into a new 10,000ft^2 factory, financed entirely by earnings rather than borrowing. As part of that move, a wider, 13in press will be added to the company's armory. ■

Data labels

Running alongside the print-converting business at Label Innovations is the company's Solutions division, run by Phil Rutter junior, which deals in data management solutions based around the LabelMagic software system written by the younger Phil. LabelMagic has approval as a printing system by all of the large DIY outlets and installations around the UK in all types of industry.

The business handles clients' complete data management needs, including supply of barcode labels for returnable crates and logistics systems. An impressive client list includes Asda (Walmart) George, WH Smith, Allied Bakeries and Omega Securicor.

Typically for Label Innovations' added value business model, the returnable crate labels represent a tough (and therefore value added) application, which has involved extensive joint development work with partners in the adhesives and face materials industries. Not only do these thermal transfer labels have to be durable – up to five years on moulded containers – but they have to overcome adhesion problems caused by the slip additives which allow crates to exit the mould. These additives tend to ooze out as the crate cools to ambient temperature, and can cause dehesion of the labels.

The most recent contract is to supply major UK retail group Waitrose with barcode systems for its Home Shopping service, including software to design the labels and configure the system. 'Our strategy is to write software for difficult applications and support it,' explains Phil Rutter jnr. 'This includes configuring databases with servers and writing our own drivers.' A move to Internet-based asset management is planned.

The Label Innovations team is now looking at how RFID could be integrated into its barcode labels business, again looking to add value through its expertise in both adhesives and in systems design.

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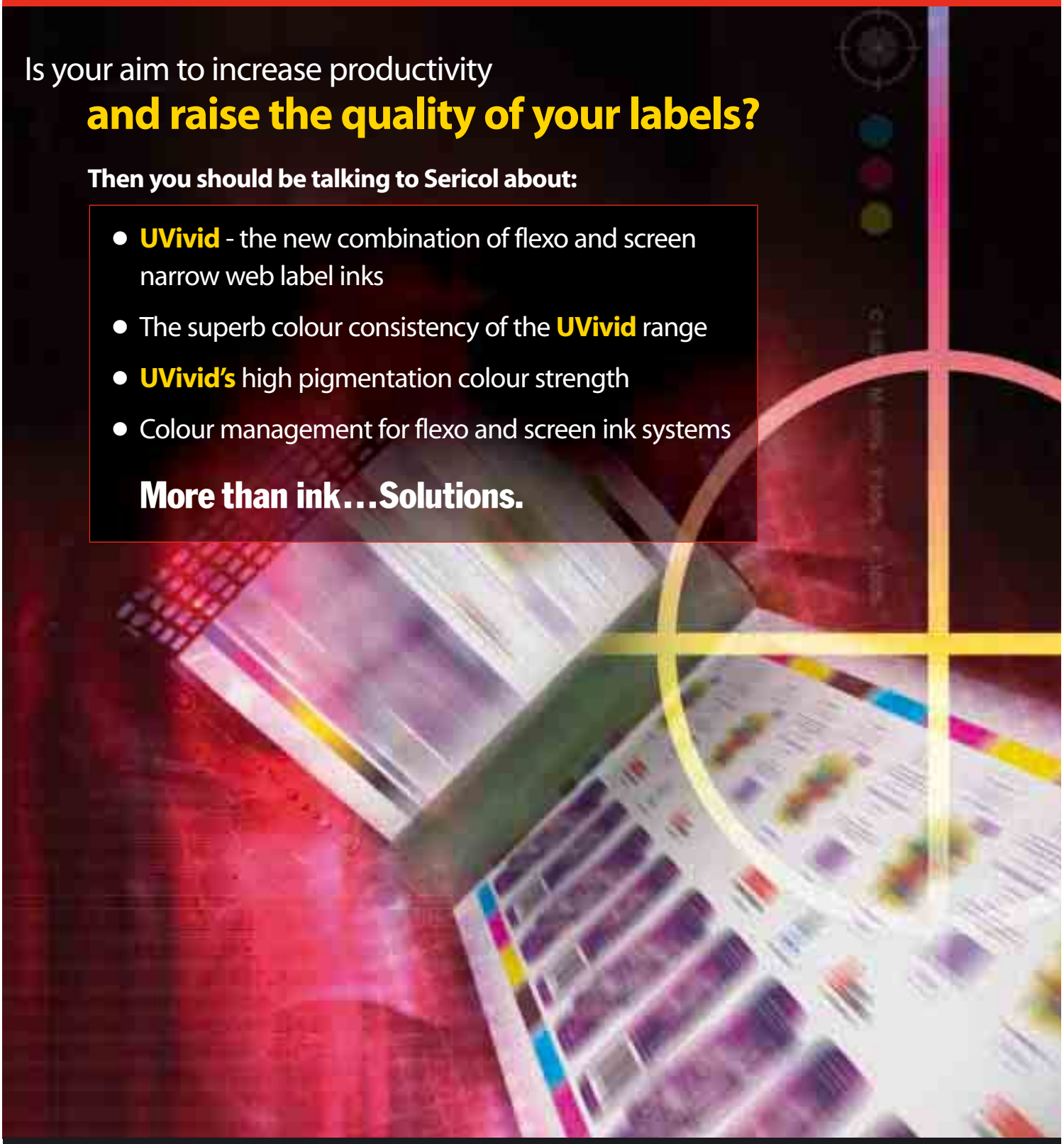

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Neoprint grows in booming Russia market

With growth rates of 20 per cent per annum predicted for the label industry across Russia and the CIS, St Petersburg-based converter Neoprint has embarked on a significant investment program with Mark Andy

Neoprint Chief Technologist, Oleg Olemskoy

A $3m investment in narrow web flexo presses in the space of two years has made St Petersburg based Neoprint the largest user of Mark Andy equipment in Russia. According to Vasily Pavlov, the company's owner: 'We wanted to establish a reputation for innovation and needed to find the right partner. Mark Andy understood our requirements and has been very supportive with development work that has required different machine specifications.'

Variant, Mark Andy's exclusive distributor in Russia and the CIS handled the sale of the four flexo machines from its headquarters in Moscow. The three 2200 models are six and eight-colour presses and have a 10" web width. Two of them are fitted with UV and Hot Air drying, while the other machine is used with water based inks, and has UV on the final print station. The larger 4150 press, which has a 20" web width is also UV and Hot Air capable.

The Neoprint label business began in 1998 with the acquisition of an inspection rewind machine to handle work for customers of Crystal Service, the parent company that has supplied equipment and systems for different applications to the security market for more than 10 years. From there, demand for labels grew rapidly, and since the company opened its production facility on the outskirts of St Petersburg, staff numbers and output has doubled every six months.

Today, Neoprint employs 100 people in manufacturing, and an additional 12 in sales and administration. The factory, which works 24 hours a day, seven days a week, has 1000m2 of floorspace divided between production and the latest warehouse facilities for raw materials and finished goods, which is stacked three racks high, and contains around two months supply of blank substrate. With same-day delivery on ink quantities up to 50kg, Neoprint can maintain supplies at a minimum level.

Typical work at Neoprint includes tax labels for the liquor trade, which are supplied printed offset litho and then overprinted flexo and converted on the Mark Andy machines. The company offers hot foil and hologram techniques, and in ▶

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addition to self-adhesive labels, also supplies tickets for cinemas, restaurants and the tourist market on 175gsm light board material.

The ticket market is especially strong, with Neoprint as Russia's largest supplier with an established brand name. The company's distribution network spans 10 members throughout the country, each with its own technical and marketing skills.

Neoprint tends to allocate different work to each of its presses and trains specialist operators to maximise productivity. The first Mark Andy machine, a 2200 model, concentrates on relatively simple two and three-colour work for supermarket applications, producing pre-printed labels for marking goods by electronic scales, using water based inks and UV on the final unit. The second 2200 moved the company into more complex label types and new markets, including food products from the fishing industry. For these labels, Neoprint specified full GEW UV and Hot Air capacity and an insetter for overprinting.

Light board

With the move into tickets, produced on light board, the third 2200 was specified with a corona treater, a die station, and included additional ink cassettes to allow for off-press preparation and reduce the level of wash-up required. It also has a GEW UV system and Hot Air drying, and currently produces tickets on 175gsm stock, although Neoprint is experimenting with 140gsm to reduce unit cost.

The fourth Mark Andy offers a significant increase in capacity with its 20" web width. The six-colour 4150 model, which was installed at the same time as a Mark Andy plate-mounter, has the extended print stations to permit the latest type of UV/Hot Air dryers from Print Concept to be fitted.

With the Russian market for labels estimated to be only 30 per cent developed, there is plenty of scope for growth. Neoprint is investigating new market opportunities including clear on clear applications – the 'no-label' look – for toiletries, as well as bottle wraps, barcodes, and new carton board applications.

Explaining the company's choice of Mark Andy UV flexo, chief technologist Oleg Olemskoy explained: 'In my opinion, the Mark Andy machines perform better across the range of substrates and variety of work that we produce at Neoprint. The presses are easy to operate and very reliable, so payback on investment is very quick. We find it easier to work with UV than water based ink because it is not as temperature sensitive, and can be left on-press between jobs. This saves on wash-up time.'

After the initial onsite training given by Mark Andy, Neoprint has become self-sufficient, and today has five members of staff qualified to instruct new operators. If additional skills are required, Mark Andy offers multi-lingual training courses at its European headquarters in Switzerland.

With the Russian label market predicted to continue growing at more than 20 per cent per annum, Vasily Pavlov is already well ahead with his next tranche of capital investment, which includes pre-press and repro equipment. With his current levels of productivity he foresees a short period of consolidation, before specifying a press for his new market initiatives. 'Our high quality production and range of expertise means we can now look at developing in the export markets,' he concluded. ■

Mark Andy makes inroads to Slovakia

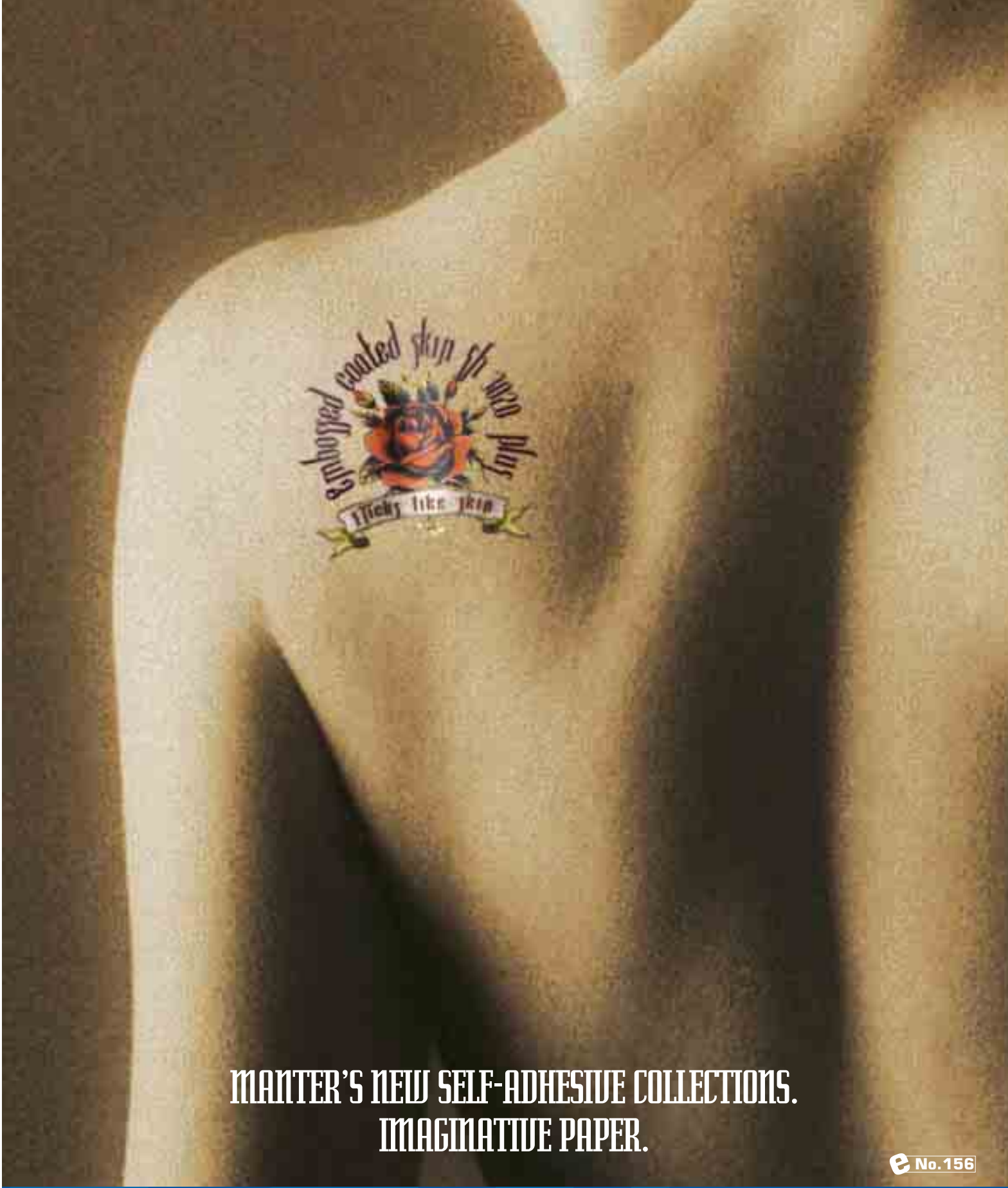
Mark Andy has installed its first Scout press at R&H Labels in Trnava, one of Slovakia's leading converters of self-adhesive label products.

The machine at R&H is a seven-colour UV press, but could be extended to eight colours by disconnecting the drive shaft and sliding in the extra unit. The press is capable of production speeds up to 90m/min, which gives a minimum of 25 minutes production per reel.

A delam/relam unit on R&H Labels' Scout is located immediately after the unwind module to enable reverse side printing. This is usually specified as printing on the adhesive, but this unit can be placed between any two print stations.

The UV drying system, supplied by Hönle, can be regulated separately at each printing unit to improve energy savings. The R&H Labels Scout is fitted with special tailor-made UV lamp covers.

The die cutting unit is equipped for cold foil, with two rewind units for the waste matrix, which can be wound to a diameter up to 508 mm. A video camera monitors the printed image and counts the labels printed.



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Fedrigoni Group

Necks big t for wine de

Innovative Australian converter and machinery designer Impresstik has launched a liner-less neck promotion system, reports **Henry Mendelson**

In an age which is renowned for specialisation and niche activities it would not be easy to nominate a labelling industry company in the Asian region which operates on a 4-pronged profile covering manufacturing, machinery design and supply, contract work and a tag application division. Indeed one would be hard pressed to name more than one.

Established 30 years ago, the Impresstik Group claims to be the only Australian label producer to fill the full gamut of governance over the four industry components.

Several others handle machinery, General Manager (Sales & Marketing), Keith Fowler admits. However he is quick to point out that these are companies which have overseas distribution agencies while Impresstik's machinery manufacturing subsidiary engineers its own purpose-designed plant for specialist applications.

It is recognised as the largest manufacturer of self-adhesive label application equipment in Australasia and probably in the South East Asian region covering virtually every industry and end market segment ranging from low cost semi-automatic machinery to automatic in-line units and ultimately, to fully integrated rotary machines for high speed applications. For over two decades it has been the source for equipment servicing the pharmaceutical, cosmetic and personal care markets and, more recently wine, bottled beer and beverage products.

The Impresstik label printing operation, centred on the company's head office complex in suburban Sydney operates 10 multi-colour roll-fed presses and a full complement of finishing and inspection equipment. Each of the presses is in-house designed and manufactured. Production is via letterpress, flexography, gravure, screen and, more recently, waterless offset. Of the 10 presses, a majority accommodate multiple-process combinations and encompass an extensive range of embellishments including screen printing, high-build varnishing, foiling, graining and embossing/de-bossing. The company maintains a fully-fledged in-house prepress department. Working on Apple Mac platforms, it performs traditional film separation for production of letterpress, flexo, offset or screen printed plates or stencils using a Linotype-Hell image setter.

Dramatic growth

Since its formation in 1994, Impresstik's contract-labelling division (Hi-Dec) has provided a comprehensive range of services from standard primary label applications to specialist tube-labelling and over-labelling for promotional purposes.

The company today is undoubtedly at the forefront of Australia's labelling industry with a workforce in excess of 100, annual turnover heading for the Aust$25 million mark via sales offices in Sydney, Melbourne and Adelaide and sales agents in New Zealand, the US and latterly in Chile. While export has played an important part in the mix of its activities, attention to overseas markets has gathered momentum since the appointment in 1993 of a North American sales agent which recently opened an office in California's Napa Valley to service the burgeoning North American wine market. Similarly, the importance of the Chilean wine industry was recognised by the appointment in 1997 a sales agent there.

hing sign

The Protag liner-less roll-fed promotional neck tag

'This somewhat dramatic growth came on the back of the company's early toiletries, pharmaceutical and personal care customer base," Keith Fowler points out, citing among others such major names as Proctor and Gamble, L'Oreal and Clairol.

'With the growth of the wine market however, our volumes have really taken off', he added. The company today is a major supplier to most of the Australian bottled beverage conglomerates including Southcorp, Orlando Wyndham, Yalumba as well as beer giant, Lion Nathan.

Advanced concept

The company's most recent innovation for this market has been the establishment of its Reeltek Systems Division, which is currently involved in introducing its patented Reeltek-Protag concept, a unique combination of liner-less roll-fed promotional neck tag and high-speed application machine. The new process has dramatically advanced the concept of neck-applied promotional tags to a stage of more precise and more versatile application than has been possible in the past.

The application machine (p.62) provides a degree of unprecedented control in bottle handling and accuracy of application with lower cost dispensing, thanks to the company's non 'pressure-sensitive' technology while the neck tag itself can be firmly implanted on a wide range of bottle shapes and sizes.

A single-component characteristic in the construction allows uninterrupted face design, a definitive upgrade from the conventional leaflet label.

It was Keith Fowler's involvement over a number of years in the specialist promotional leaflet label market which led to the development of the new concept at Reeltek Systems International, as the new subsidiary has been dubbed.

'Traditionally these promotional units were only able to be hand applied which required a team of people to be brought in, while the only other automated systems used an overhead standard p/s applicator with dry peel material', Fowler explained.

'While that was deemed better than hand application, the accuracy simply wasn't there. It required a wide neck to the bottle and the tag itself would often sit quite loosely, which meant it could get dislodged or damaged'.

He added: 'We looked at the problem and decided the only way to approach it was to start with a totally clean sheet in order to come up with a custom designed and integrated system and a purpose-built applicator, still roll-fed by a ▶

> "The neck tags sat surprisingly well on the bottle"

tractor feed at the point of application but the tag, when its in-wind doesn't need alignment to dispense it efficiently, eliminates liner wastage.

'Because of the accuracy (able to be achieved), the tag is held down and sits more securely at the base of the neck of the bottle. As a result the system enables the size of a promotional tag to be extended quite dramatically'.

The company promoted the concept at LabelExpo USA and will promote it again at next year's LabelExpo Europe with the principal aim of sourcing licensees for North and South America and ultimately, Europe.

Industry pioneer

The man generally acknowledged as having converted the Australian labelling industry to the pressure sensitive world, Werner Mokesch turned his fledgling die engraving operation into arguably the region's most versatile and creative labelling operation, spanning both application and applicator machinery.

The young Mokesch, fresh off the boat from his native Austria saw the antipodes as the land of opportunity to develop his ideas for new systems and new processes in the labelling industry. When the opening came to extend activities to the wider labelling industry he was quick to appreciate the value of attaching an engineering arm to any application operation. Partnering with Swiss enthusiast, Peter Baumli, the two-pronged approach by the two pioneers soon helped to make the company a force to be reckoned with.

In more recent years, Mokesch believes the advent of waterless offset has made dramatic contributions to achieving quality outputs, particularly in shorter run situations.

Heading a company renowned for its innovative approach to design, manufacture and application of labels for almost every conceivable industry, Mokesch sees the current trend to the pressure sensitive area continue at the expense of wet glue applications, largely because of its efficiencies and the appearance and quality of the end product. Ecological factors, flexibility of design and accuracy of application all contribute to this trend, he contends.

Having taken the path to pressure sensitive technology from its earliest beginnings, Mokesch has spent 30 years breaking down the mindsets evolved around a traditional methodology in the face of a higher component cost and has succeeded. How far this success will go in the future will depend very much on the outside-the-square thinking Mokesch and his machinery-engineer partner, Peter Baumli. ■

The Protag application machine

PROTAG to the Test – BRL Hardy Case Story:

The BRL Hardy Wine Company, one of the first to use the Protag system in Australia, required a promotional neck-tag for a 1.2 million run on its 'R&R' brand. The Protag draws attention to a special promotional product - containing 33.3% extra wine in an elongated claret bottle (for the regular 750ml price).

In this case, the Protag applicator was programmed to automatically tag every-other promotional bottle on the conveyer – as per BRL Hardy's requirements. The end result, and the advantages seen from using the Protag system, are summarised below by Denys Hornabrook, Senior Brand Manager:

'This new automated neck tag application concept was a breath of fresh air. We have tried different systems over time, but continue to hand apply our neck tags, incurring increased labour costs and sacrificing machine-line speed. Impressed by Reeltek's claimed capabilities and costs, we decided to put 'Protag' to the test. From the initial presentation to machine supply, Reeltek had just eight weeks (including the Christmas break) to meet our installation deadline. In addition, they printed and supplied over 700,000 neck tags on continuous rolls. Given the machine's application speed, and the fact that no time was lost on roll-changing (and no sticky backing paper to discard), 'Protag' was not only efficient to run but presented us with significant savings. Also of importance to me (being a Marketer), the neck tags sat surprisingly well on the bottle and didn't move around or fall off. Our experience in using the new 'Protag' system was excellent".

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Sheet automation

Polar-Mohr recently held an Open Day at its German HQ to discuss automating wet glue label finishing operations. **Andy Thomas** reports on a subject that all too often gets overlooked

Polar DC-M die cutter in 'safe' mode

Automating finishing operations for sheetfed label printers is a subject which often gets overlooked. For example, there is no comprehensive demonstration of automated wet glue finishing systems at Labelexpo. This is a critical area as sheetfed litho converters come under increasing pressure to cut costs.

The post-press/finishing area is often the last to be considered for investment, despite the fact that efficiencies realised here can often dramatically affect the cost of the finished piece.

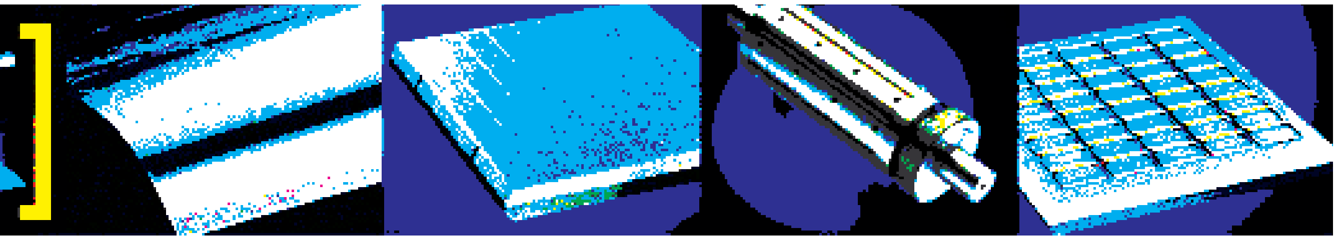
The central fact is that labour costs in post-press continue to rise, while labor costs are falling in pre-press and remain more or less stable at the press stage. In Germany, for example, post-press costs in the commercial print market have risen by as much as 40 per cent in the last ten years.

These trends can be attributed to increased efficiency and automation in prepress and press operations, while post-press becomes more labor intensive. Why? Because in a sheetfed operation, once the sheet has been printed and coated, post-press is the only way to extend the value chain. At the same time, runs are getting smaller and cycle times are reduced, so set-up and non-productive times on post-press equipment are rising disproportionately. The Post-press department is forced to deal with more work as well as more value added work by increasing manpower.

There are three strategies to combat rising labor costs:

- Optimize production facilities (production, materials management, networking) and automate wherever possible.
- Reduce setup and non-productive times to a minimum.
- Ensure that all workstations in your company have the same consistent level of information. Avoid multiple input of the same data (e.g. for programming machines). Use tools with an optimum number of cuts for the respective run.
- Minimize the percentage of unnecessary manual operations in all post-press processes.

In the commercial offset world the general 'rule of thumb' is that every €1000 invested in peripheral cutting equipment increases efficiency by one per cent.



> “Today, 1,000 sheets are converted into 42,000 labels in three minutes. This makes an average output of 840,000 labels per hour”

Polar system options

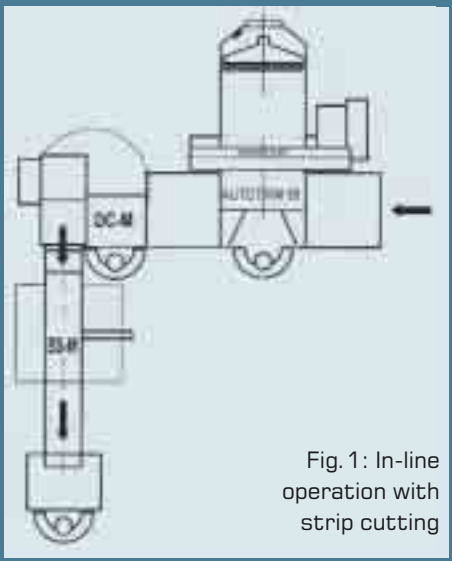


Fig. 1: In-line operation with strip cutting

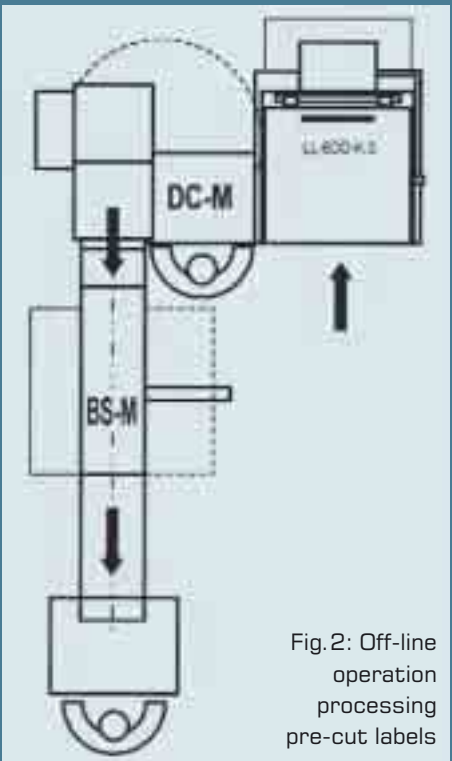


Fig. 2: Off-line operation processing pre-cut labels

Case study

An installation of one of Polar-Mohr’s label-specific automation solutions at Grafindustria Manfredi, in Trient, Italy provides an instructive case study.

Before the middle of the ‘90s, Tipolito Manfredi was an ‘average’ sheetfed printing house. Owner Mariano Manfredi decided to totally reorganize his enterprise after recognizing the growing demand for labels in the Trient area from wine, marmalade, fruit juice producers and the mineral water industry. At the same time, quality requirements were rising with varnish coatings and multi-colored printing becoming increasingly common.

So the Trient businessman bought two four-color Heidelberg Speedmasters and a Speedmaster fitted with a varnishing unit. The enormous expansion of the label printing division made it necessary to streamline the entire firm, including the finishing department.

Today Grafindustria Manfredi has a production area covering 5000 m² and employs over thirty people. Three Polar cutting lines were employed in the finishing department. Then Italian Polar agency Macchingraf persuaded Manfredi to reduce its costs by employing the new automated Polar Label Systems launched at Drupa.

One of these systems, the Polar Label System SC-20 MB, suited Manfredi perfectly. The SC-20 MB system components include the Polar Autotrim M high-speed cutter and B1E/ AC multi-station bander.

At Drupa 2000 the Manfredi company bought the first Polar label system in Italy. Soon after its commissioning, the new Polar system cut as many labels in one hour as were previously cut in an entire shift, and with one operator instead of three persons previously. Today, 1,000 sheets are converted into 42,000 labels in three minutes. This makes an average output of 840,000 labels per hour.

A primary factor in this rapid order handling is Manfredi’s internal data management. Manfredi employ an IBM AS-400 configured in such a way that it can be interlinked with all production phases using CIP3. The prepress data is transferred to the press and to the Polar cutters, which allows cutting to be performed with hardly any make-ready time.

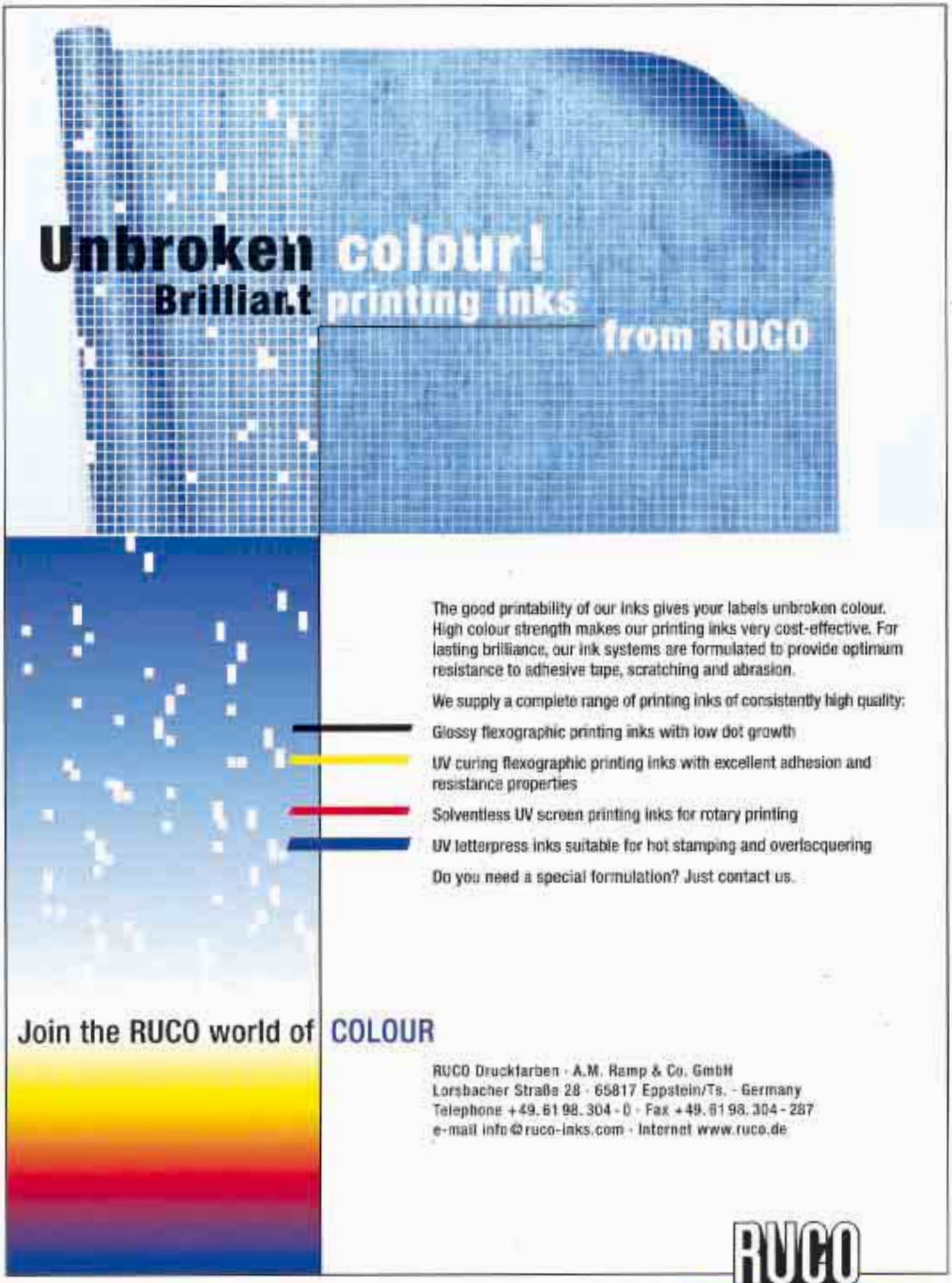
Simply programming the cutters used to require approximately 20 per cent of the job time, which reduced the production output by this factor.

To further enhance productivity Manfredi is now working on implementing a computer to plate system.

Semi-automatic

At the open day, Polar gave examples of workflows using its semi-automated DC-M die-cutter. Basically built for off-line operation, it can be combined with other components to form production systems for processing medium-size and smaller label runs.

When dealing with such quantities, short setup times are the most important point, and Polar has developed an external preparation ▶



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> “Such production systems noticeably reduce the production cost when dealing with smaller or medium-sized label quantities”

system for cutting-dies which employs alternate frames. The dies are preadjusted outside the die-cutter, then the frame containing the mounted tool is automatically locked in the die-cutter. The precision adjustment from the printed image is performed using a motorized system with the support of a graphic display on the die-cutter screen.

Polar says this has resulted in changeover times around 30 per cent faster than previously attainable. For repeat orders, the cutting-die position can be stored.

The DC-M die-cutter can be furnished with a banding system which provides medium and small-size label producers with easy-to-handle and highly flexible production facilities.

Such production systems work much more efficiently than stand-alone die-cutters, and noticeably reduce the production cost when dealing with smaller or medium-sized label quantities (see diagrams p.66):

First example (In-line-operation with strip cutting, figure 1):

- High-speed Polar ED cutter (with Autotrim) is fed with reams prepared for cutting. It cuts the layers to labels. These are unloaded onto the loading table located between the high-speed cutter and the die-cutter (first person).
- Label packs are taken over and loaded into the die-cutter (second person).
- Automated die-cutting, automatic transfer to Polar BS-M banding station (standard banding/ log banding).
- Delivery onto packing table. Taking over / packing (third person).
- Components: High-speed cutter Polar ED / Autotrim, intermediate deposit (e. g. 100 x 100 cm), Polar die cutter DC-M, Polar single-head bander BS-M, packing table (for example 75 x 100 cm).
- Operating persons: Three (label cutting included).

Second example (Off-line-operation, figure 2):

- Precut label products are buffered after they have been cut.
- Piling board buffer (air-pallet lift without air cushion).
- The material loaded in the buffer is taken over to the piling board buffer at the DC-M die-cutter.
- The labels are unloaded manually from the buffer and fed into the die-cutter (first person). Automated die-cutting, automatic transfer to Polar BS-M banding station (standard banding/ log banding).
- Delivery onto packing table. Taking over / packing (second person).
- Components: POLAR piling board buffer, POLAR die-cutter DC-M:
- POLAR single-head bander BS-M, packing table (e. g. 75 x 100 cm).
- Operating personnel: Two (label cutting not included). ■

Automatic workflow

At its open day, Polar Mohr demonstrated an elegant system designed and built for the world's largest privately owned printing group – QUAD Graphics in Sussex, Wisconsin / USA. Although not directly a labelling application, it is an interesting example of the kind of efficiency savings which can be made in a sheetfed operation.

QUAD wanted fully automatic four-side trimming of printed sheets at high volume (two-digit million sheets per run) without human intervention. High-speed cutter loading is key, ensured by optimizing the skid in a pile turner. The high-speed cutter is unloaded onto an intermediate deposit by a gripper-loading system. Automatic stacking of the layers is carried out with a Polar Transomat E and gripper loading system. The system operates over three shifts, seven days a week, and retains the possibility to switch off the automatic mode to operate the system conventionally with manual unloading via front table of the cutter.††

This unattended, fully automatic workflow is implemented mostly with standard elements of the Polar line of products and system controls and the cost savings over three shifts (108h) were dramatic – 48 per cent. Savings were 33 per cent over two shifts and four per cent over one shift. Bill Graushar, plant supervisor at Quad Graphics, Sussex, commented 'Automation is clearly the way of future. For Quad Graphics or any printer to remain strong, we need to find ways to be more efficient by increasing throughput, increasing sales, reducing inventory and reducing job turn-around time. Automation such as the Polar Cutting System displayed here is clearly the way for us to obtain our efficiency goals.'

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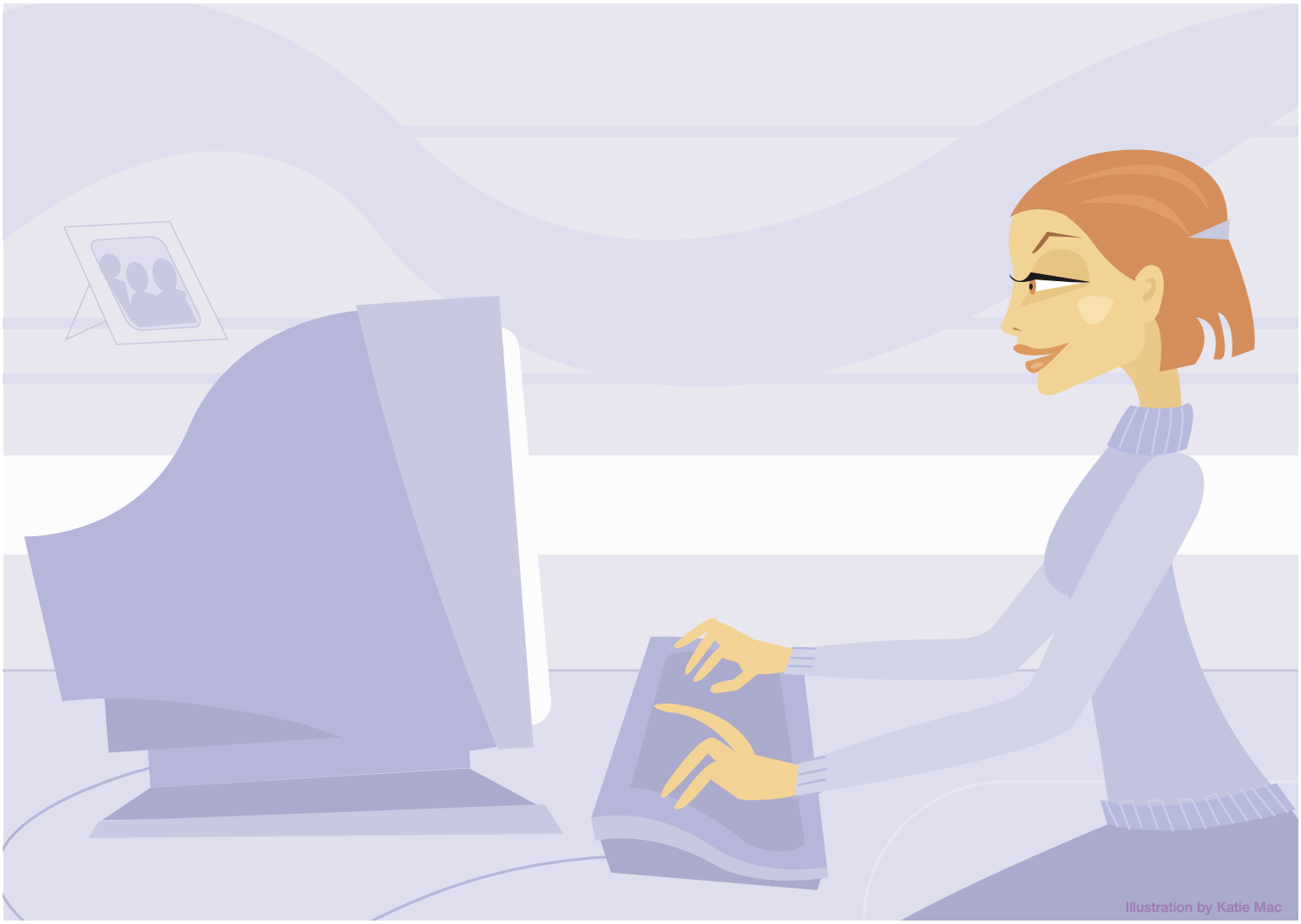
'Just in time' – an industry phase that haunts any converter having to react quickly to customer demands. So, how do you beat the clock? Consider management information systems to help you keep on top of all your order monitoring, inventory control, job estimating and specification. **Natalie Martin** investigates

Back in 1990, Impressive Labels based in Safford, Arizona, decided to invest in an integrated software system. Previously, Impressive Labels used manual systems – all checks and invoices were hand written. With a staff now of 140 employees, a turnover of 17 million dollars a year and home to 21 narrow web presses, Tim Taylor, vice president of sales explains, 'streamlining processes and being efficient is vital.'

Every converter is facing the same pressures to perform and deliver the finished product. 'With the demand for shorter runs and quicker turn around these days, people don't want a lot of inventorying, there's enormous pressure on commodity managers and buyers to reduce cost which is tough to deal with.' Impressive Labels has the capabilities to print screen, letterpress, offset and flexo and offer anything from roll to roll, roll to



switched on?

sheet, roll to fanfold – any finish that's required. 'We look for ways to add product applications with the least amount of equipment modifications and do as many things as we can on the equipment that we have as opposed to going down a lot of different paths requiring different equipment,' says Taylor. The company believes in engineered solutions and is not afraid to take on new challenges.

Traditionally, the core of the business focused on electronics, but during the past couple of years Impressive Labels has also branched out into wine labelling, some personal care and gourmet, and now there's also a big push towards security authenticity and a play for labeling of medical equipment. 'We always start out by understanding the performance requirements of an application, we talk about the engineering and technical qualities and get answers to questions before we find the appropriate solution,' continues Taylor.

Running such a complex business demands state-of-the-art control and monitoring systems, and Impressive Labels turned to CRC Information Systems to implement a management software program.

Cord Clonts, IT director for Impressive Labels says, 'The software tracks both time and material, which allows us to monitor not only how much time is spent on each job but specifies how much time is allocated to areas such as set-up. This enables us to pay our operators accordingly and view how efficient our plant is operating. Essentially, on operator uses a wand to update the progress of a job throughout the shop floor. This data is used for payroll and determining profitability of jobs by generating accurate estimated vs. actual reports.'

Machine monitoring data collection units are hooked up to all 21 presses and die cutters which calculate and track paper usage and waste as well as using a roll inventory module that can easily maintain and track $450,000 worth of inventory, approximately 1,600 rolls, comprised of over 450 different stocks in 28 different slit widths.

'As each roll is received it is scanned with a wand and entered into the CRC system's Purchasing module,' explains Clonts. 'As requests for production are received the appropriate roll is pulled from inventory. The software determines the unused portion of the roll and a new bar code is generated as the roll is taken back to inventory.' Currently, Impressive has just under $500,000 worth of inventory. 'Within a minute I ▶

Software management flow

Initial menu screen


Production details generated in estimating

Roll tracking info received through usage

Labor costs and material usage captured

can determine our on-hand inventory and be assured that the number is 98 per cent accurate.'

Georges Scherlizin, president of Impressive Labels, explains further, 'Eliminating redundant data entry by streamlining our workflow has increased overall productivity. Information flows very logically and naturally providing the right people with easy access to our data.' Scherlizin also comments that as Impressive Labels has grown over the years, the CRC system has helped control costs by not having to hire additional administrative employees. And provided with timely information, it's helped Impressive Labels to make better business decisions.

There's a number of benefits Scherlizin cites: the amount of information gained and money saved has been invaluable; the data is always accurate; accounting has been able to close the book on jobs much faster because of the precise financial tools available.

By adding the enhancements of Label Estimating, Impressive Labels will have a true measure for job costing by analysing the CRC system's estimated vs. actual reports. CRC's e-Finished Goods Order Entry will allow customers to gain access to their inventory via a Web browser. A buyer can submit jobs, track order status, and receive e-mail acknowledgements when jobs are ordered and shipped. This will reduce the number of incoming calls and allow Impressive Labels' sales force to dedicate more resources to obtaining new business.

Buying advice

Gerald Clement, president of Computer Productivity Services, realises the broader issues affecting narrow web converters when it comes to weighing up cost against the advantages of implementing software. He says business owners increasingly want a fully integrated system that will help them make money. Key areas seem to be customer facing applications such as customer service, credit, quote and order tracking and invoicing. 'They want to be able to key in these high volume, repetitive tasks, fast, with no mistakes, so they need a single system in which they can multi-task (i.e. check inventory and purchasing and credit information for someone while they have an estimate open).'

Clement also says that many converters have experimented with separate financial, credit, estimating, order tracking, scheduling, inventory, customer relationship management and e-commerce systems. 'Separate systems often fail, as information has to be re-keyed or transferred between systems. If the information is not accurate people will not rely on it or even use it.'

He continues by saying that a few years ago people just wanted an estimating or scheduling system. Now they want a fully integrated system that can talk to vendor and customer systems as well. 'It's difficult to get software specifically designed for narrow web ▶

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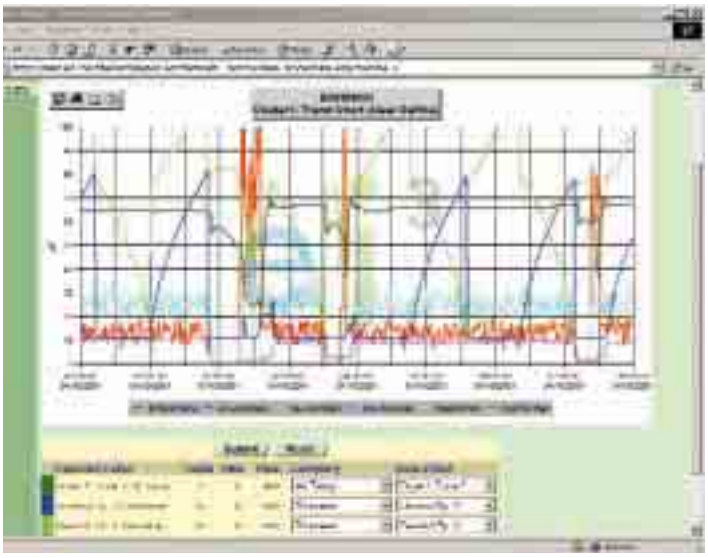
> "A few years ago people just wanted an estimating or scheduling system. Now they want a fully integrated system that can talk to vendor and customer systems as well"



Sitewatch: On-line monitoring gives plant staff insight into manufacturing operations

converting. There's a lot of software for litho being used by narrow web label converters and it's not great. It costs a lot of money to customize and adapt to narrow web needs and never really works efficiently.'

Supplier automation

Avery Dennison's Framingham, Massachusetts's facility produces labels for home and business use. Avery began its implementation of the PECAS Vision management information system from Radius Solutions in September 1998, and by October 1, 1999 had fully completed the implementation.

Prior to acquiring PECAS Vision, Avery Dennison was utilizing a custom-made system, which was not Y2K compliant. Avery realized they needed a system that was Y2K compliant…and they needed it fast. Avery began a review of available systems in the marketplace, but was not impressed by many of the generic offerings they viewed. Avery realized that an integrated management information system would improve reporting capabilities by tracking materials quickly and efficiently.

Jayne Sutton, general manager for Avery Dennison Framlingham, stresses the importance of technology in the label industry. 'Everyone knows you can't run a business without technology. And, you can't run a business without having access to information.' The software follows the actual flow of information for a label, print, flexible packaging or carton company, beginning with estimating and ending with accounts receivable. It provides a clear and organized picture of a company's business processes. Once there is an understanding of existing processes, it's easy to see the value of each task performed in a business and determine whether or not to continue a procedure.

It's also easier to conduct critical analysis, which allows key personnel to quickly pinpoint deviations from plans in many areas, including waste and inventory management. Sutton says, 'It's important to get commitment from top-level management. You need to make expectations clear…and more importantly, you have to understand the needs of the business.'

Print company management systems fall into one of three categories:

- Module specific packages, which address a specific business function such as Estimating or Scheduling. These are typically supplied by a small software company
- Generic ERP packages, which do not map to a print business
- A home-grown system which has a very limited future. There is a strong need for an integrated solution specifically designed for printing companies, which is supplied by a proven vendor.

In terms of return on investment, David Taylor, president of Radius Solutions, argues that converters have realized significant efficiencies by centralizing and standardizing their business processes. For example, when Mebane Packaging, a five-plant company (now a part of Mead Westvaco), implemented MIS software, they were able to generate cost savings of around $5 million in their first year of operation.

If you buy a software solution that doesn't closely fit your business processes then it's going to cost you time and money. This is particularly true if you try to fit an ERP solution into a printing business. Basically, generic ERP solutions have not been designed to fit the needs of a printer. Generic ERP solutions are designed to work in classical manufacturing industries, such as automotive, where the production line for a car is setup for a period of months, not hours. The concept of estimating a job and combining orders to reduce production costs just does not translate to a generic ERP solution. The life cycle of a short-run label is dramatically different to that of a car.

Ask any realtor what are the three most important attributes that a property can have and they'll answer with another old cliché – location, location and location. A similar concept applies to software. The top three attributes of a software package are fit, fit and fit. There really is nothing that comes close on the scale of importance.

Hosted productivity tools

Brett Smith, CEO of ei3 Corporation puts the case for Hosted productivity tools, which, he says, provide converters with an economical way to improve productivity and uptime, because they avoid capital investment in equipment and personnel. Hosted productivity tools work by establishing a direct connection between the Application Service Provider (ASP), and the converter's machine controls. Using specialized software, the ASP can monitor, analyze, record, and safeguard the manufacturer's process line data. This information can be accessed from any Internet-enabled computer, anywhere in the world, providing the entire manufacturing enterprise with a view of process line activity that is 'unprecedented in scope, detail, and accessibility.'

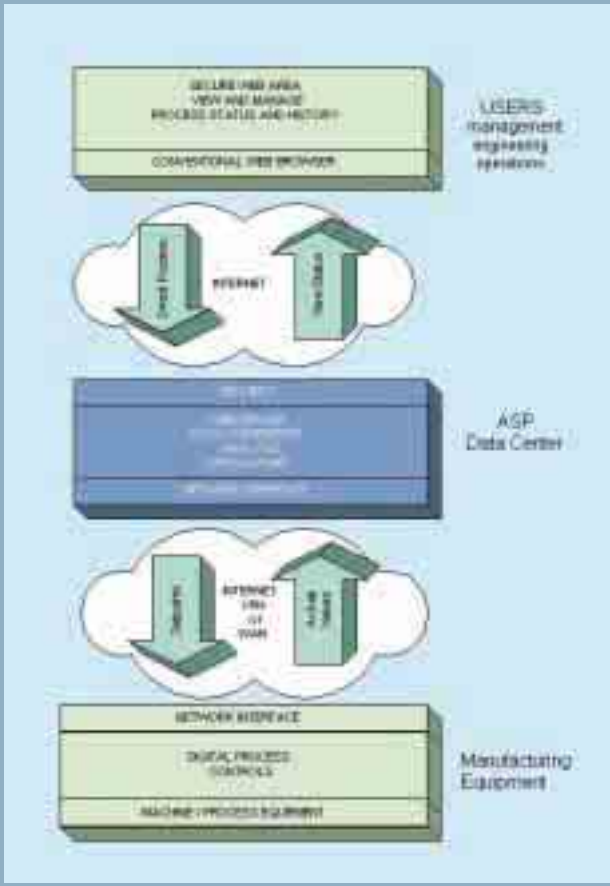
The hosted application delivery model is also ideally suited for providing remote engineering support. 'With direct line of sight into process line activity, the ASP's engineering staff is equipped to solve process line problems quickly and efficiently,' says Smith. 'This avoids the high costs associated with employing an around the clock on-site support staff, without risking increased downtime by cutting engineering resources.'

Smith says converters should consider the following points before selecting a technology solution:

- Does the solution avoid capital investment in equipment and new staff
- Does it provide high cost savings
- Does it deliver a clear, short-term return on investment
- Can it offer multiplicity of functions
- Does it offer a high level of integration
- Is it scalable
- Is it easy to use
- Can it be quickly and easily deployed

'Application hosting avoids capital expenses in the hardware, software and administrative staff that would otherwise be required to run robust software applications internally. Hosting also provides a higher level of failover protection, because applications are hosted in a clustered, and highly fault-tolerant environment.'

Hosted productivity tools that monitor, manage, analyze, and record process line activity can serve as a cost-effective



Data flow over a secure, high-speed network

replacement for SCADA (Supervisory Control and Data Acquisition) software.

In comparing the cost of the hardware, software, and customization labor needed to deploy SCADA to the cost of deploying hosted services, on average, the ASP solution saves almost 50 per cent of the investment, according to Smith. 'The scale is further tipped in favor of hosted service delivery when the cost of in-plant maintenance and administration that is required for SCADA is considered. With low upfront costs, return-on-investment of hosted services is easily quantified by comparing speed of problem resolution to cost of downtime.'

Hosted, Web-enabled services also tend to provide a broader range of functions because the ASP is not constrained by manufacturing and installation processes. For the converter, this eliminates the need to install and administer myriad software applications from multiple vendors. Specialized software functions such as asset management, control & alarm maintenance, process modeling and optimization, process monitoring, planning & scheduling, etc. can be provided through a single provider to simplify and streamline costs and administration. This also avoids any overlap in functionality that might be offered through different software packages.

As Internet-enabled applications, hosted productivity tools pave the way for integration of MES (Manufacturing Execution System), CRM (Customer Relationship Management) and ERP (Enterprise Resource Planning) software with ▶

No.112

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Remote engineering staff members monitor, analyze and troubleshoot process line problems from their Operations Center

manufacturing operations. Because the ASP maintains a vast network of servers, services can be scaled to meet any manufacturer's expanding support needs.

Initial deployment of hosted services is performed within a matter of days, not weeks or even months as is often the case with traditional software installations. Information is collected and organized into graphically detailed charts, graphs and reports, which can be viewed by authorized users from a Web browser.

'Hosted productivity tools help converters become just-in-time plants by increasing equipment reliability and performance, and reducing the average length of downtime events,' proclaims Smith. 'This is because hosted applications give converters instant access to highly qualified engineers around-the-clock. Productivity tools can also be used to analyze and compare dozens of machine parameters, such as line speed, tension and temperature to discover new opportunities for process improvement.' Alarms function to warn plant staff of waning functionality, preventing slowdowns from becoming failures. A centralized database of past machine events helps plant engineers find solutions to what are often found to be recurring problems. Web-enabled productivity tools can also be used to automate traditional manual processes. For example, quality assurance tickets can be incorporated into an Internet-enabled centralized data repository.

Together, these capabilities could improve delivery performance, and reduce inventory to transform a high capacity manufacturer into a just-in-time plant. Before the introduction of hosted productivity tools, converters were forced to either employ a large, around-the-clock technical support staff, or wait for a service tech to arrive to solve a vexing problem. With hosted services, a remote engineering team responds to equipment problems with the speed and expertise of a full, around-the-clock onsite technical staff at a fraction of the cost of actually supporting one in-house.

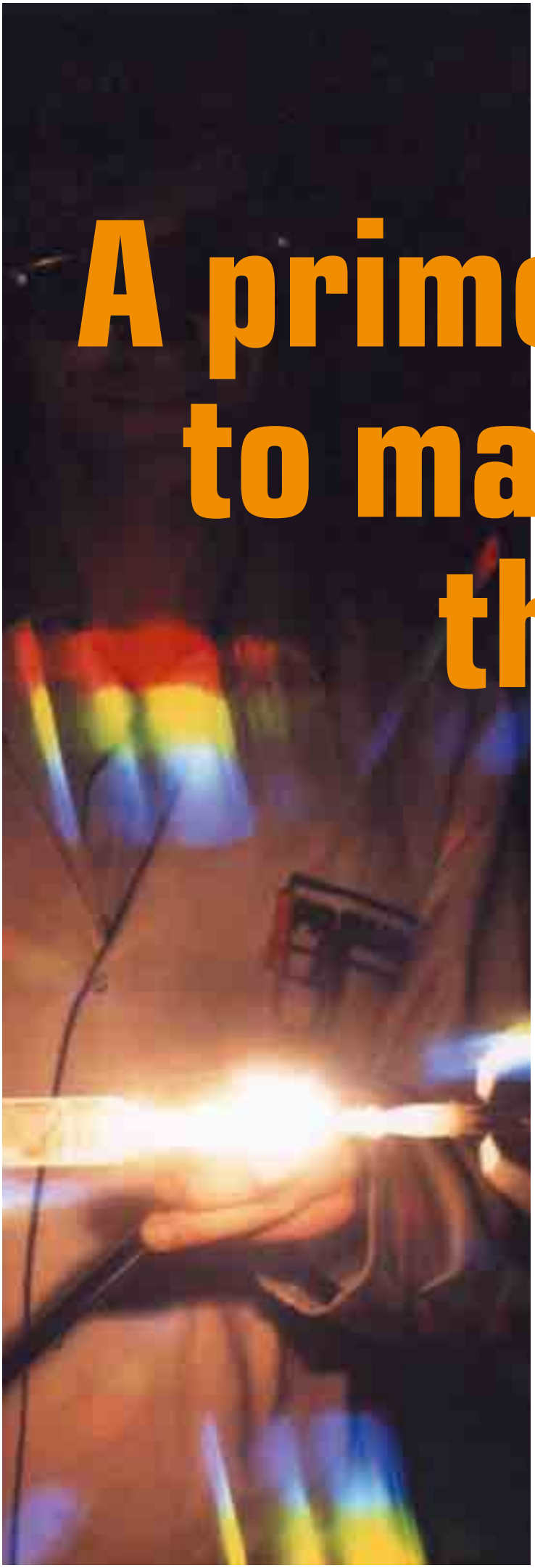
Without a centralized way of monitoring and recording process line data, up-to-date process line settings and machine performance history were difficult to track and maintain.

The 'always-on' high speed connection between the ASP and the converter's machine controls also provides a conduit for regular back up of control system settings and software, ensuring complete recovery in the event of an outage or disaster. Before the introduction of hosted services, converters relied on periodic back up of system settings, if any at all. Also, whereas an ASP's high-speed connection makes software back up seamless, earlier back-up methods were time-consuming, labor-intensive, and slow.

So how can small and medium-sized converters justify the cost for this technology? Answers Smith: 'Because outsourced services are cost-effective and flexible, they provide the best solution for any converter, regardless of size. For small and medium-sized manufacturers who cannot afford to invest in expensive technology deployments, hosted services provide the best strategy for optimization and competitive differentiation.' Smith points out that optimizing equipment performance and reducing downtime is the 'best protection for converters against price pressures and fluctuations in demand. Productivity tools that eliminate pennies per product in production costs can make all the difference in terms of profitability.' ■

Tips from Ken Meinhardt, president of Tailored Solutions:

- Take time to research the software that you are considering
- Invest in a management system that will easily track customer and job history
- Your new system should make order processing more efficient and consistent and improve communication with production
- Consider a system that utilizes barcode technology for tracking stock purchasing and usage
- Consider a system with integrated accounting
- Set a deadline
- Make sure you invest in the right software
- Training is key
- Develop and maintain a good relationship with your vendor
- Test your back ups



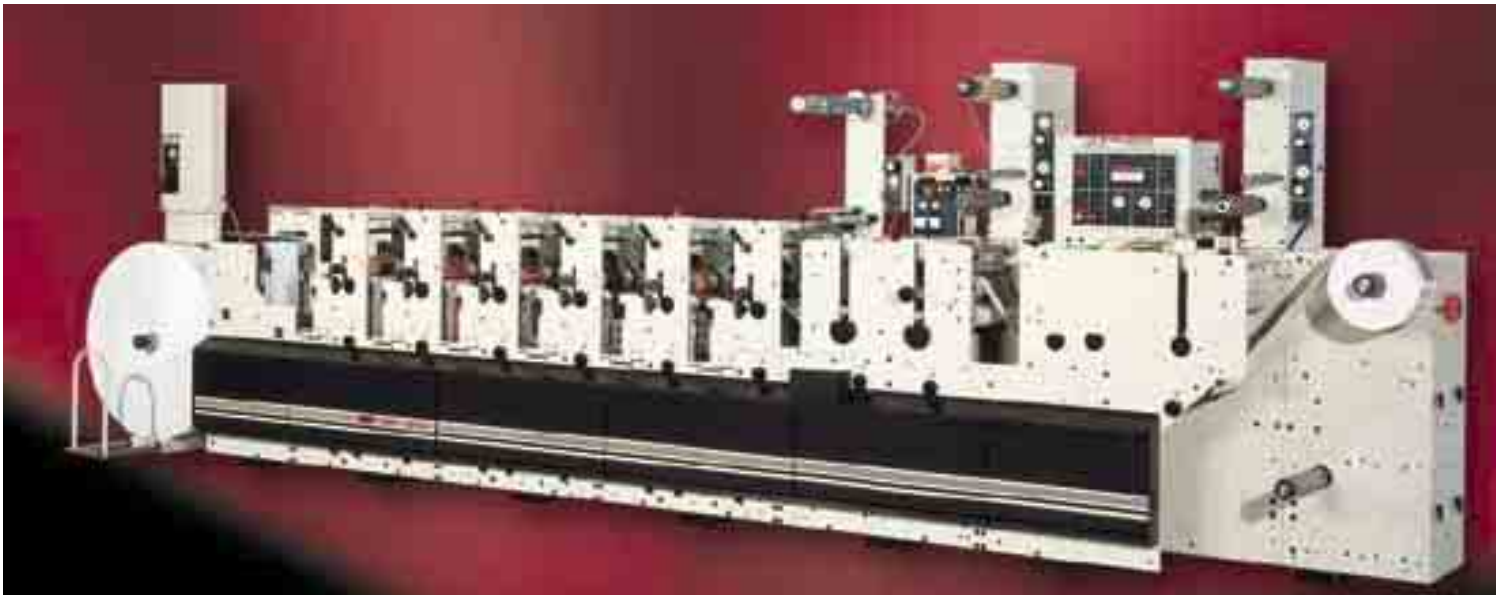
A prime guide to managing the cure

UV curing technology involves many variables. **Barry Hunt** explains the basics of how they fit together

As a mature and widely-accepted technology, UV curing is recognised by many converters as a valuable production tool in its own right. Long after its inception among commercial printers, its growth in labelling began to take off when converters started using UV rotary letterpress, followed by UV rotary screen and offset to produce quality prime-product labels. This legacy explains why UV curing is so well established among many Western European converters, not least in Britain and Ireland. Trade sources suggest that roughly 75 per cent of new press installations in these countries now carry UV units, 15 per cent have conventional infra red dryers with air blowers, while the remainder combine both methods. Many Scandinavian and Benelux converters have long followed a similar pattern.

Today the universal use of multi-process presses and a corresponding increase in UV flexo units have provided the stimulus for UV growth. Its progress has helped change the face of narrow-web production despite the fact that installing a typical UV system with full electronic control gear is a costly add-on.

Of course, the technology provides more than just a ▶



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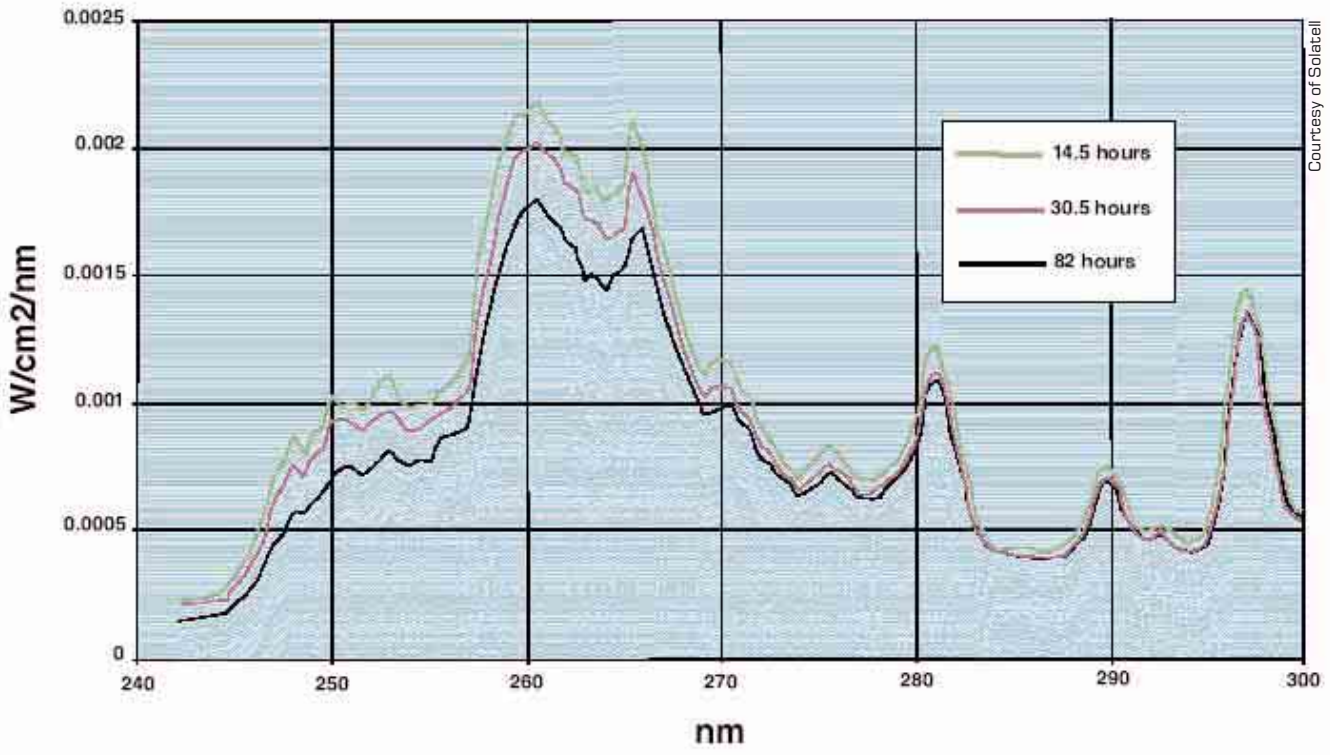
Comparison of new and aged lamps



method of accelerated drying, since it offers considerable benefits in terms of printed quality and production efficiencies.

Although it has found its commercial niche, system manufacturers must still work hard on resolving the number one issue: heat management. That is, ensuring the temperature reaching the substrate is at an acceptable level to effect a proper cure, without reducing overall operating efficiencies. As explained later, some of the latest techniques have encouraged suppliers to refer to 'cold UV'. However, it's a misnomer. A truly 'cold' UV system would be impractical because the curing process requires some heat to initiate the polymerisation process. The nearest to a cold UV system is the excimer method, which has a narrower spectral range and does not produce IR energy. So far it is restricted to low temperature industrial applications, such as curing wood veneers.

Ink developments

Before looking at the hardware, its a truism that UV's progress in our industry has depended heavily on developments from ink maker's laboratories. It's well known that UV inks do not dry through oxidisation like oil-based inks or evaporation like water/solvent inks, but instead work by a photochemical reaction to high levels of UV energy, or radiation. The latest UV inks for specific processes can generally produce deep, curable coatings with high opacity, yet perform on the press like conventional inks. UV inks have photo-initiators to absorb the radiation from a high energy UV lamp. Together with other binder components, a chemical process allows them to cross link, or polymerise. Therefore, a liquid ink turns almost instantly into a dry and durable coating on the substrate's surface. It is ready for subsequent varnishing and die cutting at normal press speeds. This type of UV curing is called a free-radical process, because the photo-initiators become free radicals, or groups of atoms containing a free electron, when exposed to UV energy.

The cationic method uses a different type of chemistry, which allows curing to continue slowly after the source of UV radiation has been removed. It is still being developed, mainly for flexo-printed food packaging because the inks are completely odourless. Electron-beam curing is also a free-radical process. However it needs a controlled atmosphere using large expensive curing modules, which largely confines the process to specialised industrial coating and laminating applications.

In the pressroom, a useful characteristic of UV inks is that they can remain open in the duct and on rollers, even overnight if necessary if the press is covered. Besides reducing wash-ups, there is less wasted ink. Unused portions can be returned to their light-tight containers. Print quality benefits include good dot gain characteristics. Lower viscosity levels for the latest UV products allow thinner ink films, while still giving good colour consistency and high density and gloss levels. UV inks are also environmentally sound, they have no solvents and UV-printed products are easily pulped and recycled.

> "It is hard to believe that the government does not know what it is doing to the print industry"

Typical UV components from UV Reasearch

Lamps and modules

UV lamps for the graphics industry are usually clear tubes made from high-quality quartz, which has a high transparency for UV energy. They contain medium-pressure mercury within an inert atmosphere and are sealed around electrode ribbons to form a vacuum. Lamps doped with certain metals, such as cobalt or gallium, change the spectrum wavelengths and are used for curing thicker ink films, such as opaque white screen inks.

Lamps usually last between 2,000-3,000 hours depending onhow well they are maintained. European power ratings are commonly defined as Watts/cm and Watts/inch in North America. (Either divide or multiply by 2.5, for example 120 Watts/cm x 2.5 is 300 Watts/inch). While lamp power does not precisely indicate performance or efficiency, higher ratings have been introduced to meet the demands of higher web speeds. Usually lamp housings hold two or four lamps rated at 160 Watts/cm each, but single housed lamps of 240 Watts/cm are now more common for some compact units.

Lamp housings are made from extruded aluminium and are usually constructed to include pull-out cassettes to facilitate quick replacement of lamps and maintenance. Some models have hinged heads to facilitate quick web-ups. Depending on application, the housing may be cooled by a regulated flow of air or have chilled water circulating around it. Several systems combine both air and water cooling. Press stoppages activate revolving or clam-shell light-tight shutters positioned above the lamp fixture. Ozone is an unwanted by-product of air-cooled UV curing, so it must be either exhausted externally or passed through a filter unit. Water-cooled systems that incorporate filter tubes are ozone free.

Heat management techniques to reduce the surface temperature of the substrate include circulating de-ionised water through quartz filter tubes or plates placed under the lamp and between the substrate. Much the same principle applies to the use of water-cooled chill drums, or rolls, depending on how the web press is configured and its web path. This method is favoured where thin films and packaging foils are used. In such cases, presses with straight web paths usually have water-cooled heatsinks, or undershieldings placed behind the substrate.

Only about 45 per cent of UV energy reaches the web directly, while the remainder is reflected at an angle off the lamp reflector's surface. Therefore, much effort has gone into reflector design because of their key role in managing heat to reduce the surface temperature of the substrate. At one time reflectors were made from highly polished aluminium or stainless steel, but modern types are now more likely to have several thin dichroic layers applied to thermally-resistant glass. The idea is that the reflector reflects only UV energy while absorbing the unwanted IR energy. This technique has led to the so-called 'cold UV' mentioned earlier. A variant is to use angled 'cold' mirrors to reflect the UV energy to the substrate to avoid direct radiation. The IR energy passes through the mirror for removal from behind by air cooling.

As readily appreciated, there are many pros and cons surrounding the different heat management methods. For example some say that 'cold' angled mirrors or water-cooled quartz tubes may reduce heat, but reduce the curing efficiency and require more power. Others argue against this. For this reason choosing the right UV system needs much care and research in order to make sense of the conflicting claims made by manufacturers.

Some would argue that the issue has become largely academic given the trend for narrow-web press manufacturers to work with one or two favoured OEM suppliers, or indeed have a business interest in a supplier. Nevertheless, many label and packaging applications require bespoke UV solutions and there remains a residual market for retro-fit systems. Presumably this explains why the UV market in both Europe and North America remains as crowded as ever. Some are strictly regional suppliers who may assemble sub-contracted components. Others may concentrate more on larger web and sheet-fed applications, while also serving industrial coating applications ranging from wood veneers to screen-printed CD disks.

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> “A common method of testing for effective curing adhesion at the start of the print run is to simply scratch the printed ink film with a fingernail”

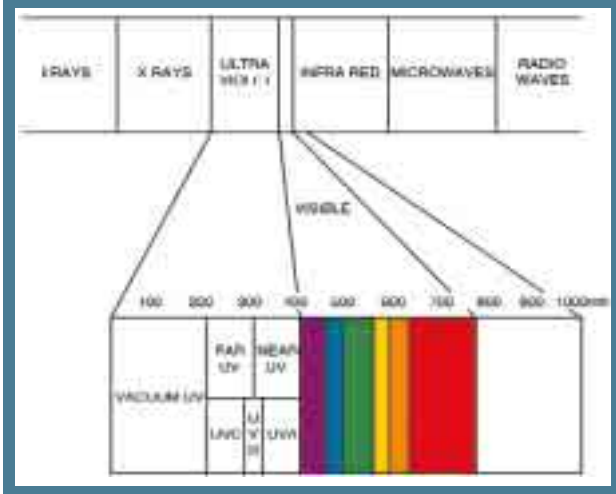
Correct curing

Electronic control devices are essential to achieve consistent curing across a range of different production parameters. But since it is not an 'on/off' process it remains something of a black art. It lacks universal standards to govern the continuous monitoring of curing levels, or the efficiency of heat management systems. Sometimes it is hard to judge whether a job is adequately cured. For example, a partial cure will cause poor ink adhesion to the substrate and the ink may remain tacky. Too heavy a hand on the power control, however, will cause a brittle ink surface and possible problems with the successive printing of process colours. A common example is to over-cure the primary screen or flexo printed background colour, so leaving an ink surface that is not completely receptive to the secondary inks. Excessive curing levels will also shrink unsupported films.

A common method of testing for effective curing adhesion at the start of the print run is to simply scratch the printed ink film with a fingernail. If the ink film breaks the ink is undercured. Another method is to place a piece of adhesive tape on the printed surface and pull it sharply towards you. A clean tape points to a successful cure, but large areas of ink left on the tape may indicate an ink-related problem. Perhaps the ink is incompatible with the substrate, in which case the ink supplier should be able to help. Rather smaller areas that resemble small dots point to an under-cure. Either increase the power of the UV intensity in line with press speed, or slow the press down.

Some systems offer infinitely-variable (stepless) control from standby to full power, which helps operators to balance the spectral output of lamps to that of press speed. It is a contentious area, given the issues revolving around lamp configurations, reflector types and focus of UV radiation, the output behaviour of UV lamps and their remaining usage life. The substrate's optical, physical and chemical properties will also influence the rate of cure through such factors as the transmission and scattering of UV light. Different colours also have different cure profiles: black obviously differs from yellow in respect of densities. Fortunately there are now various ways of measuring UV output, including permanent UV sensors located in the system, or by hand-held monitors with measuring probes to gauge UV output on the press in order to take comparative readings. Finally, both UV lamps and reflectors require careful cleaning at regular intervals to maintain a system at peak efficiency, although this factor is frequently neglected in respect of reflectors and often leads to the unnecessary replacement of lamps. ■

The UV spectrum



UV forms a small part of the electromagnetic spectrum. It is expressed in units of wavelengths and frequency and measured in nanometers. UV wavelengths for curing printing inks, varnishes and adhesive coatings occupy a short range between 200 and 380 nanometers.

- Complete and fast curing takes place at the high energy UVC end of the spectrum: 200 to 280 nanometers.
- The UVB middle-wave range from 280 to 315 nanometers gives a deeper cure of medium-viscosity ink and varnish layers.
- The UVA range of 315 - 380 is closest to the visible light part of the electromagnetic spectrum and will stimulate the deepest curing of ink and varnish layers.

Configuration factors to consider:

- Lamp power
- Lamp units required in each housing
- Positioning related to print units
- Reflector type (elliptical, parabolic or other)
- Reflector composition
- Distance from lamp to substrate
- Filter type (quartz plates or tubes)
- Direction of cooling air
- Temperature of lamp housing/reflector
- Ducting for air extraction (where needed)
- Heat exchangers for filtered or unfiltered water-cooled systems

Matrix solution

Lattice Labels has reaped extraordinary productivity benefits from the installation of a centralised matrix removal system on its presses and rewinders. **Andy Thomas** reports

Founded ten years ago by John Darby and Chris Beadle, two refugees from labelstock supplier Samuel Jones, Lattice Labels is today a highly successful business with a turnover of £7M and a position second only to Avery Dennison in the supply of A4 labels to the UK market.

The Samuel Jones heritage is important, as Chris Beadle explains: 'It gives us a particular expertise in coating, which is key to developing innovative new products for the forms/labels market.'

Lattice Labels, although celebrating its 10th anniversary this year, has kept a low profile, since it operates through brokers rather than direct to end users. But a series of exciting investments is set to cause quite a stir in the narrow web industry.

The company runs 14 converting machines in its 23,000sq ft greenfield plant – which it moved into 18 months ago – including three Arsomas and seven Timsons flexo machines. 'We predominantly operate at the low margin end of the market where maximising efficiency of machines and work environment is key,' says John Darby.

The decision to invest £100,000 in a centralised matrix removal system – rather than the edge trim removal system initially being considered – was championed initially by John Darby, and Chris Beadle admits that he and the other directors took some convincing:

'Because of the market we're in, we run our presses hard, ▶


noices

Spiral ducting takes matrix waste outside the building

> "How the matrix waste roll is handled dictates the running speed and operational efficiency of the press"

16 hours a day five days a week. Normally if you want to increase productivity you install another press. But John convinced me that making the operation more efficient by dealing with the matrix waste issue was a better investment at that time.'

'It's not just about how many machines you have, but how you use them,' says John Darby. 'We bought three label presses last year which shows an increase in turnover and assets – traditional accounting pluses. But installing the matrix extraction system does not show an increase in turnover and has no asset value. So although it increases profitability, most companies would overlook these kinds of investment. To make a £100K investment for no extra capacity is a hard argument to make.'

The problems in handling matrix waste are well known – having to stop the press to take away the matrix roll then taking the rolls off the floor to a skip. But the effect on press efficiency from rewind tension problems can be equally severe. Press manufacturers have responded with servo-driven matrix rolls which slow as the matrix roll gets bigger, but this all adds to the cost of the press. More problems arise with 'skinny' matrix, which is more prone to breaking.

Indeed, it's fair to say that how the matrix waste roll is handled dictates the running speed and operational efficiency of the press – particularly where printers have invested in flying splice unwinds (not the case at Lattice) for long production runs and where the matrix rewind roll has to be changed every 3,000 metres.

It is rarely that we get the opportunity to quantify the amount of operator time spent dealing with matrix waste, but Lattice had just that opportunity after installing an Impact Air Systems matrix removal system on two of its presses. Chris Beadle: 'We discovered that operators were spending three minutes out of every 40 changing the waste matrix rolls. Now multiply that across a sixteen hour day and across 12 machines and you reach a figure of 2,880 hours a year!' Impact Air Systems was quickly given the order to put twelve machines onto the matrix removal system.

The matrix waste removal system at Lattice Labels consists of a suction head (like a vacuum cleaner), which sits above the matrix stripping station on each machine and 'sucks' the matrix into a chamber over a plasma-covered roller. Rotating blades, driven by integral 1.5KW motors and also plasma coated to stop the adhesive sticking, cut the matrix into 1-2 inch strips. These strips are then sucked into spiral ducting and transported outside the press hall and into a material separator and compactor located in the rear of the building. A small amount of oil is run through the system to ensure there are no blockages or build-ups of waste material.

Chris Beadle reckons that a £100,000 investment in ▶

matrix removal has led to a potential increase in production efficiency worth £500K, and this is an on-going return. Put simply, the presses are no longer slowed down by the necessity of handling matrix waste or by problems involving matrix rewind tension or print register re-adjustment.

There are other advantages too in terms of waste disposal costs. Skips leaving the site decreased by 65 per cent and the pressroom floor is completely clear of waste – a major selling point when customers visit the site as well as enhancing the general work environment.

'We went from one or two skips a day to one compactor a week. We were spending £60-£70K a year on landfilling matrix waste rolls, and now we spend £20K a year,' enthuses Beadle.

The Impact matrix removal system works on all types of materials Lattice processes, including thin films and 'skinny' matrix. It has been found not to work on a very limited number of substrates like very aggressive tyre adhesives, which have a heavy coating weight and sit on an aluminium backing. 'But to put this in perspective, we converted 15 million sq metres in the last year and 14.8M was no problem for the system,' says Beadle.

Installing the matrix extraction has also had a profound effect on the press operators. 'They have become very protective of it,' notes John Darby. 'If the cutter blades go off-line for servicing they complain loudly. Improvements become accepted very quickly, but people very soon forget how bad things were before.'

The fact that the matrix waste is cut into thin strips not only reduces the overall volume of waste, but should in theory make the matrix easier to burn for energy recovery (since it is easier to get air between the strips than into a tightly wound matrix roll). But the crazy economics of waste recovery currently work against such common sense due to the low price of packaging waste in the UK: 'One power station said we would have to pay them twice what we now pay in landfill charges to take away and burn our matrix waste!' says Chris Beadle.

Incineration has to be a better solution for matrix waste than recycling, Beadle believes: 'We can't keep on recycling silicone papers and films. A lot of self adhesive laminates already won't adhere to corrugated boxes which contain a high proportion of recycled silicone.'

The UK government's decision to break ranks with the rest of the EU and treat matrix waste as taxable packaging waste is meanwhile having a heavy impact on converters like Lattice, which is forced to pay £30-40 for each tonne of matrix waste it processes. ■

Impact Air

The matrix waste removal system at Lattice was supplied and installed by Impact Air Systems based in Leicester, UK, which has been supplying waste extraction systems to the paper, board and converting industries for over 15 years. After three years development in the narrow web and matrix field, the system can be fitted to any narrow web press and incorporated into an existing waste removal system or supplied as part of a complete centralised system, as at Lattice Labels.

Impact's technical sales manager Terry Ward is particularly excited about the potential for the system as in-line carton converting becomes big business for narrow web converters, where efficient handling of the skeletal waste can be a problem.

Impact has now entered a technology sharing agreement with Precision AirConvey Corporation - which developed the same matrix systems throughout America – following an extremely successful Labelexpo Americas show in Chicago in September when the companies received 150 enquiries a day from interested converters. This alliance enables PAC/Impact to offer a single product with full European/American service support for larger converters.

Interestingly, some major narrow web press manufacturers are now seriously looking at offering the Impact/PAC matrix removal as an OEM addition to their presses (some already offer trim extraction).

In Colour

As well as blank labels, Lattice took a strategic decision three years ago to invest in a multi-colour capability and now has three 7-colour Arsoma presses. 'We are converters that print, and not the other way round,' says Chris Beadle. Nonetheless, Lattice is capable of producing work up to 900 screen aniloxes holding 1-2 per cent dots. 'The Gallus presses have taken us into areas that five years ago we would not have been capable of,' says Beadle. Lattice's work is split 70 per cent plain labels to 30 per cent colour printed.

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Letterpress hits back

At the recent AB Graphics Open House held in Bridlington, UK, major new converting systems were introduced to European label printers, including the Lintec LPM300iTiP letterpress and a 'stand alone' web inspection system from Flytec. **Andy Thomas** reports

Lintec's Automatic Control Roller System

AB Graphics' Open House was the first opportunity for European converters to see the latest in letterpress technology, Lintec's shaftless LPM-300iT intermittent machine. The press features major innovations over the existing 300 series and a doubling of print speed to a maximum 250 impressions/minute, extending the application of the press into longer runs.

The LPM-300iT is now driven by servo motors controlling the print units, web transport, tension and electronic register. Lintec calls this the ISMC (Independent Servo Motor Control) system.

The servo drives make it much faster and easier to change the printing plate compared to the old LPM300, where the forme rollers had to be backed off from the printing plate. In Plate Cylinder mode on the iT, pressing the plate change button indexes the cylinder to its 'change' position. After the bearing support is released, the cylinder can be quickly slid out and exchanged. When the new cylinder has been mounted, it indexes back without loss of impression setting.

Lintec provides a plate mounter unit and two sets of cylinders with the press so jobs can be prepared off-line and changed rapidly.

But the most interesting innovation is the (optional) computerised Ink Pre-Set (IP) system, which eliminates the need to manually adjust screws for ink volume.

What Lintec calls the Automatic Control Roller System (ACRS) system is based on an ink transfer roller divided into eleven segments, each of which becomes, in effect, an individual ink tranfer roller. Depending upon information supplied by the computer system on target ink density across the printed image – which can be adjusted by the press operator in real time – the rollers index backwards to pick up ink from the kneading roller and transfer the correct amount to the ink fountain roller for delivery to the ink fountain. The inking data is displayed on a monitor and is saved via floppy disk for instant set-up of repeat jobs (90 jobs per disk). The ink profile data for a complete job can be printed out for quality control purposes.

New also is a standard repeat length display for second ▶


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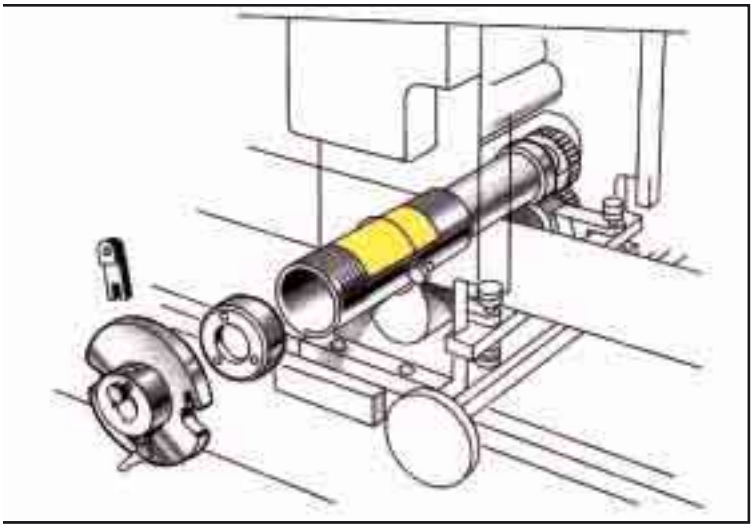


Fast change plate cylinder

pass of a web through the machine, and at the Open Day were some excellent examples of twice-through work.

The press format is 300mm web width, 280mm print width, with repeat from 50mm to 245mm. The demonstration press was shown with five print stations and GEW's VCP UV curing. Optional are UV flexo varnishing units – any station can be converted – and flexible die station.

Tony Bell, general manager at AB Graphic Machinery, confirms that the LPM300iTiP press on display was sold shortly after the Open House. 'Prior to the press being installed A B Graphic Machinery ran several trials for potential customers, all of whom were extremely impressed the speed of the initial job set up and subsequent recall of the job from a floppy disc,' comments Bell. 'The set up time can be fully appreciated when viewing a section of web taken from the machine which shows the point at which the previous job was running in perfect register and the changing images up to the point where the next job is ready to run. The trials have indicated that these changeovers can be achieved in two and a half press lengths of material.'

Inspector calls

Also on show for the first time was flytec's fleyeVision 100 per cent web inspection system, optimised for the inspection of pharmaceutical and cosmetic product labels in web widths up to 180mm. The fleyeVision image processing system works at inspection speeds up to 150 metres/minute at 800 x 600 pixel resolution, attaining a defect resolution of 0.06mm. The machine can be optionally equipped with an inkjet head or OCR inspection module for pharmaceutical applications.

Defects are identified against a stored 'master image' (formed from analysing 40 images during set-up), and include slurs, absence of ink, out-of-register printing, stains, smudging, missing labels, missing text, faulty grid removal and automatic indication of repeat defects. A module to detect colour shifts is under development.

The system is based on Smart Camera Technology which does not need PC support. Flytec says this means 'very little' maintenance is required and the system is more stable than PC-based camera control systems. For example, in the event of a loss of power, the system can be re-started straight away. PC experience is not necessary to learn the system, which the manufacturer says can be mastered in less than an hour due to the well organised menu structure and use of a dedicated control panel. The detected defect is automatically positioned in front of the operator. Optional is a trigger controller to steer the image processing systems.

Because fleyeVision is a stand-alone system, it can be retro-fitted to existing inspection machinery – two systems have already been sold on Omega rewinders, for example. There is an option to multi-plex cameras for wider webs, still at 150 metres/minute.

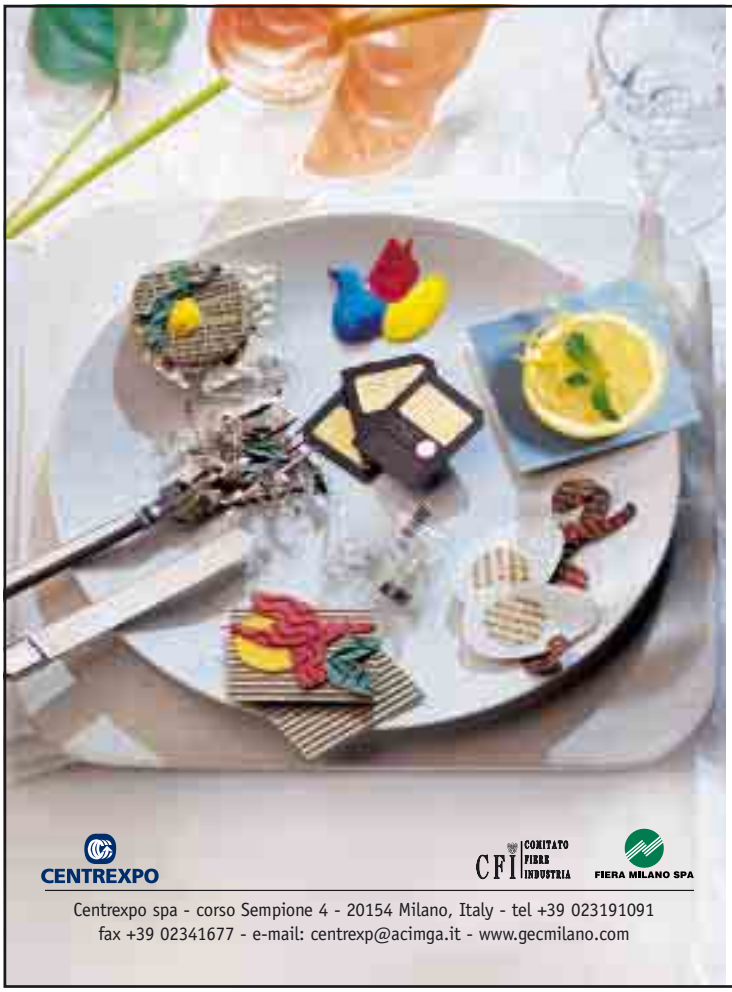
e No.202

Also on show...

- Omega Systems premiered its Ti 150 RFID/EAS label manufacturing system, an entry level machine which takes rolls of finished printed die cut labels and integrates the 'smart tags' in one pass. The unit can handle web widths between 60 and 150mm and operates at a maximum web speed of 60 metres/minute subject to label size and materials, on a label length of 35 – 200mm. Maximum applicator speed is 1,000 labels/minute, again dependent on label size and material type and the system can be built with multiple lanes. An important option is a check module which ensures each chip is active.

- Also on show was a Gi Due Combat press, for which AB Graphic is the UK agent. A lot of excitement was generated by the news of the integral Screen head which was unveiled at Labelexpo Americas and the launch of the 'entry level' Quadra press (for more details see Labelexpo Americas show report in this issue).

- Ben Bunch was discussing a gearless roll-away fan folder which registers the fold mechanism to the cross perforation, eliminating the need for change gears. An optional sensor registers to a mark or label gap. The system eliminates the need for sprocket or line holes when folding off-line. Speeds up to 130m/minute (500ft/minute) are possible and the unit is available as a factory installed upgrade kit for selected Ben Bunch folders.



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e No.107

e No.126

High end functions brought to Illustrator

McGurk Studios' London-based packaging artwork agency has beta tested Esko-Graphics' DeskPack toolset

London-based packaging design and artwork agency, Thames McGurk, is the first UK company to alpha test DeskPack, Esko-Graphics' dedicated, low cost, desktop packaging production toolset.

DeskPack extends Adobe Illustrator's functionality with a series of powerful plug-ins including the trapX interactive trapping tool that uses the ColorStitch trapping engine on the DeskPack server. 'DeskPack is a fantastic tool for packaging design and artwork agencies who want an easy entry into repro using familiar and well proven desktop software without having to invest up front in expensive hardware and software and extensive training,' says Paul Fraine, director of Thames McGurk.

'DeskPack was developed at exactly the right time for us with trapX and ColorStitch the missing pieces in our jigsaw,' Fraine points out. 'Over the last two years with more powerful Macintosh hardware, we were able to do 95 per cent of the job in Adobe Illustrator and Photoshop. We just used (parent company) McGurk Studios as a trapping bureau. Digital files were sent back and forth via ISDN and we printed out the final job as a digital Cromalin.'

Working in native Illustrator, Thames McGurk now finds it relatively simple to use the trapping tool even on complex jobs. 'The retail industry is very competitive and our customers are always looking for something different to give them an edge. This may be through a combination of the quality of the stock together with different ink and varnishing effects, CTs and vignettes, which makes the job complicated to trap. That's where DeskPack really scores.'

Fraine is particularly impressed with the way that all the objects, text, special fills, vignettes and CTs are trapped with the original design on separate layers inside Illustrator. 'We can turn the layer on and off and are able to edit it. If the original file changes, we can delete the trap layer and trap the file again. While the trapping is being done on the server we can do other jobs, then bring the print-ready design back to the Mac when we require. We never have to move outside Illustrator.'

Fraine says the software is very clever in being able to reproduce an overprint from a CT that has been masked. 'For example, if the CT overprint is in yellow or a light colour, it will create a line work version of the CT to trap into the required objects in a seamless manner, and this keeps the file size down. As we are not producing film, it is a big confidence booster for us if we can preview everything before we send it digitally to the printer. The transparency function in Illustrator 9 and 10 allows us to see the overprints and grips.'

Currently Thames McGurk only has one workstation dedicated to DeskPack but they plan to take up all five licences. It is then that the job ticket option will prove very useful because all the operators will be able to share the trapping tickets. 'Some of our customers have ten different print specifications and it will be very easy to tailor each of them using the ticket editor on the Mac and storing the information on the server.' ■

Pandora's box

ScenicSoft, now wholly owned by Creo, has announced the availability of Pandora 2.0, the next major release of its PDF-based step-and-repeat packaging imposition solution.

Key features include support for Job Definition Format (JDF), editable non-rectangular bleed paths automatically derived from CAD die line information, bleed overlap detection with advanced, easy-to-use tools for automatic overlap correction, die-station ordering with fully automated placement of die-station number marks and die mirroring for the creation of double-sided layouts.

Job Definition Format (JDF) is an XML-based file format used to describe the entire print production cycle. ScenicSoft also implements the JDF CIP4 imposition and separation process.

Labelling news

Raflatac acquires MACtac business

UPM-Kymmene Corporation has acquired the MACtac pressure sensitive materials business from US-based Bemis Company Inc., for USD 420 million. At the same time UPM-Kymmene will sell its plastic films business, Walki Films, to Bemis Company, Inc. for USD 70 million. The acquisition by UPM-Kymmene will strengthen the global business operations of its subsidiary, Raflatac. Both transactions are expected to close by year-end and are subject to approvals by 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. The deal will increase Raflatac's share of the US self-adhesive labelstock market significantly and gain knowhow in special materials. The product offering will be complemented by MACtac's graphic products and technical two-sided tapes.

UPM-Kymmene says efficiencies will be improved through specialization and optimization of both companies' production lines. Other key sources for synergies are logistics and purchasing. MACtac also possesses technology which complements Rafsec's smart labels development.

UPM-Kymmene's Converting Industry division now consists of Raflatac, producing self-adhesive labelstock, Loparex producing siliconized release materials and Walki Wisa producing wrappings and composite materials.

Panoval has new owner

Groupe Gascogne has acquired self-adhesive materials manufacturer SJP (Suisse) SA – formerly Panoval Label SA – from UK firm Rutland Trust.

SJP (Suisse) SA makes self-adhesive paper and plastic materials, and generated sales of €36.15M in 2001. It has a production capacity of 100million m^2 per year in self-adhesive materials and 120million m^2 in silicon-coated paper, with main markets in France, Benelux, Germany and Switzerland. SJP employs 115 staff. The company has been renamed Sopal-Panoval.

The Groupe Gascogne flexible packaging division's protective wraps business, which is managed by Dominique Durand, now comprises Sopal in France, Sopal BV in the Netherlands and Sopal-Panoval SA in Switzerland, and is expected to generate sales of almost €160M per year.

Sopal is now a leading European manufacturer of sophisticated packaging materials and protective wraps. The company operates in the fields of food packaging, industrial applications, silicon-coated paper and gummed and adhesive paper.

To increase its market share, Sopal-Panoval SA, managed by Nam Nguyen, will take full advantage of Sopal's international network. Sopal generates more than 50 per cent of its sales from exports to more than 70 countries.

Philippe Simon, deputy managing director, member of Groupe Gascogne's executive board and head of development, said, 'The acquisition of SJP fits perfectly with Group Gascogne's development strategy in its downstream businesses'.

Converter arises from Avery MBO

Sentega Holding bv, a company created by a group of former Avery Dennison executives in Europe, has acquired three European label converting plants from Avery Dennison. Sentega, which is privately held, specialises in manufacturing customised self-adhesive labels for a wide range of customers across Europe.

Sentega's products range from variable imprinting labels to highly specialised automotive, safety and functional solutions. As well as its manufacturing plants in the UK and the Netherlands, Sentega runs a pan-European sales operation and ranks among the top ten label converters in Europe. Sentega's customer base includes many market-leading automotive, electronics, aeronautics and durable goods manufacturers, as well as retail and logistics operators in Europe.

Green light for Akzo Nobel plant

Akzo Nobel Inks has announced investment approval for a new 22,000 sq. ft. fully automated UV ink manufacturing facility in Plymouth, Minnesota.

The facility will be up and running by January 2003, tying the manufacture of both waterbased and UV curable products more closely with Akzo Nobel Inks' R&D and Center for Technical Excellence (CTE).

By bringing UV manufacturing to Plymouth, Akzo Nobel Inks will enjoy increased capacity to support its growing US business.

Hank Malone, vice president of sales and marketing states, 'I am very excited about our investment in this state of the art manufacturing facility as it further strengthens our leadership position in the narrow web marketplace.'

v team resurrects th & McLaurin

cLaurin, the Glasgow, UK-lstock manufacturer, has ased from the administra-xisting management team managing director, 'busi-an Mackay.

company will continue to r the name of Smith &

ent from the company said ors and employees would k all of our customers and suppliers for their help during the last two difficult months. Their valuable support has enabled us to continue trading and establish our new company.'

The company originally went into administration in May, blaming over-capacity in the market. The new management team hopes to benefit from reduced costs – the workforce has been cut by one third – and higher margin customers.

packaging show to run side Labelexpo Europe 2003

show organiser Tarsus s acquired the BPC aimed at the bottling, nd canning industries. It -located with Labelexpo 003 at the Parc des in Brussels from 24 - 27 2003.

ll be working in partner-Binsted, which owns the ines for the bottling, pack-anning industries, to make ion 'the premier liquid how in the world,' accord-Douglas Emslie, group director of Tarsus Group quisition is a logical exten-our largest exhibition, It will add considerable visitors as they will now be in one place the latest describes the biennial event as a conference led exhibition. 'Market research has clearly shown the need for education and ideas sharing in this part of the Far East, one of the biggest emerging markets in the world,' says Pellow. Labelexpo Asia will take place in Singapore in November 2004.

RDP Marathon and Drent Goebel Strategic Alliance
RDP Marathon Inc and Drent Goebel have entered a strategic marketing alliance, where RDP Marathon, in close cooperation with Drent Goebel America, will market and support Drent Goebel narrow-web products in the U.S. and Canada, including

Designer labels

We look at the latest developments in label design, materials

Combination litho/flexo/blocking without using Screen creates 'Window' effect to view night sky
Printer: **Walsall Print Company**
Client:**Rocket Fuel Drinks Company**
Materials: **Clear PP facestock/glassine liner**
Process: **7-colour flexo/litho combination with foil blocking and gloss varnish**

'Watch strap' designed 7-page form-label, with front page laminated for impact and durability and incorporating 'money off' coupon
Printer: **New Era Packaging**
Materials: **Fasson PE Premium**
Process: **5-colour process rotary letterpress**

'No label' use of transparency and gloss of PE stretch sleeves replaces paper labels
Printer: **ITW Auto-Sleeve**
Client: **Si & Si Company, Yugoslavia**
Process: **6-colour flexo, including white under certain image areas**

Effective use of clear-on-clear labels on PET bottles to relaunch 'fresh fruit' beverages on a supermarket private label
Printer: **Not disclosed**
Client: **Waitrose**
Materials: **Clear-on-clear**

and printing techniques to see which way the brands are moving

Stretch sleeves printed on white film as a wet glue replacement
Printer: **ITW Auto-Sleeve**
Client: **Gerolsteiner**
Process: **6-colour flexo + varnish**

Phosphorescent effect under UV lights and 'soft touch' varnish for tactile effect
Printer: **Sleever International**
Client: **Pierrel Champagne**
Materials: **100 micron PET shrink sleeve, UV reactive inks.**

Film printed on face , then de-lam and printed on adhesive side to create image which becomes visible as bottle is emptied
Printer: **Labelgraphics**
Materials: **Fasson S4000 ultra clear acrylic adhesive and PP face film**
Process: **UV Screen on 9-colour Gallus Arsoma, 2-cols front label, 1-col each side**

Printer provides packaging development service for start-up venture, including design and origination
Printer: **LabelExpress**
Client: **HempGarden**
Materials: **Gloss white PP**
Process: **2-colour letterpress with matt varnish for additional product resistance**

Press installations

Multi-web letterpress provides pharma solutions

Guysal's general manager Séan Nolan, pictured left, with operations manager John O'Brien

Guysal Ltd, the specialist self-adhesive label division of Cork-based Guy & Co – a Clondalkin Group company – has installed a Gallus R200. It is the company's fourth Gallus rotary letterpress machine, and is designed to cater for the high volume of short-run specialist pharmaceutical products that are distributed worldwide.

General manager, Séan Nolan, commented: 'In addition to offering a high degree of interchangeability and flexibility with our existing machines, we find the rotary letterpress technique best suited to our clients and their markets, where legibility of fine point type is essential.'

The Gallus machines at Guysal are six-colour with rotary screen, hot-foil, and full UV curing, the latest being capable of multi-web operation. This allows Guysal to provide innovative solutions in situations where, for safety reasons, a large amount of text needs to be contained within a small area on the label.

Guysal is one of only two Irish printers to hold the PCOP (Pharmaceutical Code of Practice) and is EN ISO 9002 and UL (Underwriters Laboratory) accredited – the latter for its work in the automotive and electronics field.

Commenting on his future investment plans, Nolan concludes:

'As always, we have been looking closely at combination machines to service our niche markets, but with our existing customer base see no current reason to go down the UV flexo route. Our customers' order pattern is more focussed on greater frequency with reduced quantities. Rotary letterpress remains the technology best suited to our requirements and highly qualified workforce.'

Healthy business at BAF

A contract to print 5 million labels per month for the pharmacy trade has prompted BAF Printers to install a second Mark Andy 2200 flexo press at their headquarters in Leeds, UK. The new machine, a 3-colour 10in press, joins an earlier 2200 and a Mark Andy 830 in a production unit geared to serve retail pharmacies, dispensing doctors, hospitals and veterinary practices throughout the UK.

Beginning life as a commercial jobbing printer in 1962, BAF moved into labels to provide a more consistent workflow. The move from wet glue to self-adhesive came three years later, and today, the company claims a 25 per cent share of its chosen market, with 'plenty of scope for growth', according to joint managing director, Angela Wallis. In addition to manufacturing both pharmacy labels and dispensing bags, BAF is now expanding into new product areas, such as a monitored dosage system for Nursing Homes and domiciliary use. Today, the company employs 15 and generates a turnover in excess of £1m, of which labels accounts for 75 per cent.

Angella Wallis, joint md at BAF

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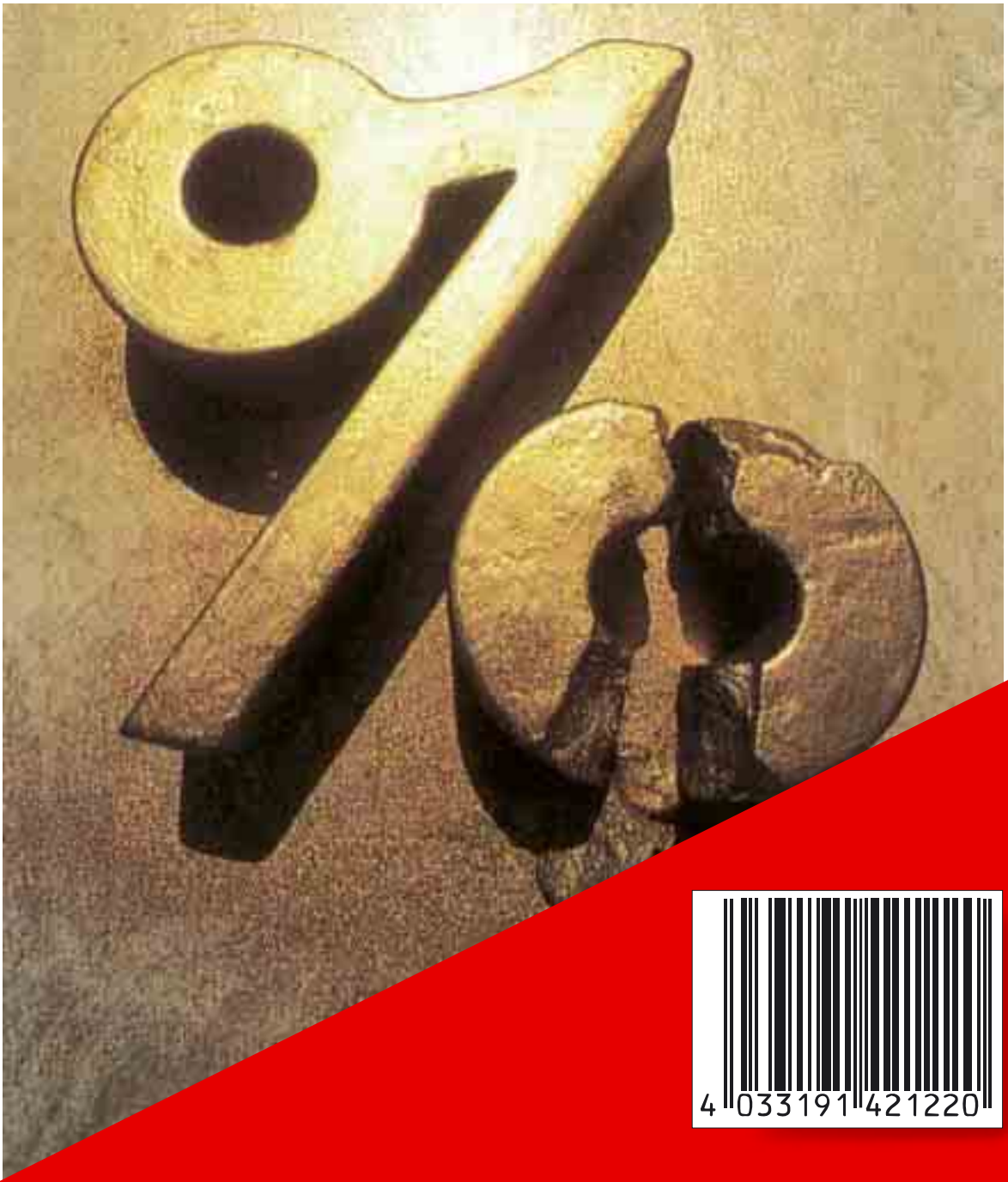

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Press installations

Unsupported film runs on Webflex

UK converter Transfixt has installed a Webflex 430 from Focus Machinery, equipped with combined UV and IR drying, corona discharge treatment system, die cutting, slitting and rewinding. The press has been specified for both pressure-sensitive labels and monofoils. Managing director of Transfixt, Sean Stanley, commented, 'A lot of our work is on unsupported filmic substrates and we had to be 100 per cent certain that we could accurately control the tension and the drying of our substrates on the Webflex. The Webflex ran at production speeds far beyond our expectations and handled unsupported film without any problems. We especially liked the operator friendliness of the press.'

Dutch label maker goes digital

Altrif Label, one of the largest manufacturers of self-adhesive labels in Europe, has added two 7-color HP Indigo ws4000 digital presses to its battery of Ko-Pack presses to handle short run work.

Altrif has seen an increasing demand for short-run digital label printing. F. P. Doomen, Altrif director, said, 'We developed a special booklet label which was a tremendous success, generating a 15 per cent increase in order volume. At the same time, we noticed an increasing need for smaller campaigns and test marketing materials. We soon realized that we needed an additional solution for orders of less than 3,000 meters in print length.'

Doomen continues, 'our existing equipment had difficulty printing more than four colors. HP Indigo's special liquid inks, which enable 7-color printing including special Pantone spot colors, as well as the system's offset quality, were for us a compelling combination. Rather than engage in time-consuming set-ups to do short runs with more than four colors on our existing Ko-Pack units, digital printing was clearly the most cost-effective solution. This is especially true when the system is equipped with the extra station, making it possible to create custom PMS colors. We also ordered the ink mixing system to further extend the color possibilities and offer our customers a value-added difference.'

Dion Goderie, Altrif technical director said the wide range of printing stock the press could handle was also important.

Textile printer adds PS press

Label and ticket supplier to the textile industry, Fastabs Ltd., based in Leicester, UK, has taken delivery of a 6 colour, 10in wide Centraflex flexo press from Focus Label Machinery. The press has been installed as part of a £500,000 investment in new press equipment, which also includes two Hamada offset presses from A.B.Dick.

This Centraflex 250 is equipped with infra red/forced air drying, UV varnishing, three die stations, web guide, splice table, turn bar, two rewinds and sheet stacker. The compact, central impression press will be used predominantly for the production of self adhesive labels.

Managing director of Fastabs, Paul Swan, said 'We have been wanting to add self-adhesive label production to our existing swing ticket and garment label operation for some time, but don't have the space for a six colour in-line press. At the same time, we didn't want to restrict ourselves to a 3 or 4 colour press. The Centraflex provides us with the perfect solution. We can now produce high quality 5 or 6 colour labels, UV varnish, die cut and rewind or stack, all within a footprint of 3 square metres. The print cassette system will be a big advantage to us when it comes to reducing downtime between job changes and when cleaning up print stations.'

Mark Andy debuts QC system

Daventry, UK-based Multi Labels has installed an 8-colour Mark Andy 2200 with a 13in web width. The flexo line is fitted with a delam/relam unit for adhesive or liner printing, while further facilities include anti static web cleaners on every station, cold foiling and laminating.

The Mark Andy also gives a world debut to First Vision Solutions. This auto register and quality monitoring system is linked to all stations. Its software enables the press to keep 'near perfect' register from start to finish of a job. In addition, the system automatically marks the web whenever print deviates from a master copy stored in the computer memory.

Additional features of the First Vision System due to come online soon are network links for office based production control parameters, avoiding shopfloor keyboard use, together with full computer reports for customers, and management reports for post run analysis of job data. Future plans include the ability to scan barcodes 'on the fly' at normal run speeds, to offer 99.99% 'Grade A' scans to every label.

Multi Labels' Roger Monk confirms that the First Vision Solutions system is already proving itself with material savings and inter-station print register to within 40-microns. 'This is unknown in rotary flexo and gives peace of mind to the printer and superb clarity to the label. It's not often a company our size can be an innovator and our decision to buy this combination will allow us to print to standards few others could hope to achieve.'

The company operates from a new 7000ft^2 production facility halfway between London and the Midlands, which today employs 20 staff and is scheduled to turnover £1.5m this year, with rising profitability.

Multi Labels can deliver jobs in five working days, with repeat orders often delivered within three.

Technology

AET introduces roll fed OPP range

AET Films has introduced two new oriented polypropylene (OPP) films specially designed to result in improved roll-fed labeling performance and efficiencies – 400 WHSL and 48 B503-2. These roll-fed label films can be applied to a wide variety of containers, including carbonated soft drinks, waters, juices, sports drinks, non-beverage and dry foods.

Says Terry Baker, sales director, AET Films, 'The high stiffness of 400 WHSL and uniformity of the transparent 48 B503-2 films are key characteristics that enhance roll-fed labeling applications and improve converting efficiencies for our valued partners.'

400 WHSL (White High Stiffness Label) is a white opaque film designed to be used as the inner web of roll-fed label laminations. 400 WHSL has higher stiffness than typical OPP films of equivalent film and label yield, resulting in enhanced labeling performance and efficiencies. 400 WHSL is to be used in conjunction with AET's transparent roll-fed label films, including new 48 B503-2. 48 B503-2 is a high yield, transparent overlaminate film designed as a replacement for 48 B503 in roll-fed label applications. 48 B503-2's design results in a more uniform and stable COF, improved hot melt adhesion, and excellent film flatness and slit roll conformity, which results in reduced label curl. **e No.203**

Environmental launch flexo inks

Environmental Inks and Coatings (EIC) has introduced Ultra Flex III inks to the wide-web and narrow-web flexographic printing industries. Ultra Flex III inks are said to combine high color strength with very low viscosity.

EIC says these intense inks pack the color strength required to print process colors on 800 to 1000+ line aniloxes and print line/solid copy with 600 to 800 line aniloxes. The viscosity of Ultra Flex III is 'the lowest known' for UV Flexo inks, says the company.

The low viscosity allows printers to avoid problems typical with higher viscosity inks such as spitting, foaming, cavitation, poor "pump-ability" and excess process dot gain. 'Ultra Flex III inks print strong color with sharp characters and clean process dots, which results from excellent ink transfer. Ultra Flex III inks also exhibit a lower affinity toward attracting air-borne dust,' says EIC.

Ultra Flex III UV Flexo inks can be printed in combination with select Environmental Inks and Coatings UV Rotary Screen, UV letterpress, and water-based inks and coatings. The company offers a complete line UV coatings and adhesives, as well as Electron beam coatings and adhesives.

Environmental Inks and Coatings recently opened a new facility in Sneek, The Netherlands, to service the European market, and this joins a strategically located network of eight full-service U.S. branches and a network of distributors world **e No.204**

Mark Andy Vision launch

Mark Andy's First Vision Solutions, an auto register and quality monitoring system, is now commercially available, enabling the press to keep 'near perfect' register from start to finish of a job. In addition, the system automatically marks the web whenever print deviates from a master copy stored in the computer memory.

Additional features of the First Vision System due to come online soon are network links for office based production control parameters, avoiding shopfloor keyboard use, together with full computer reports for customers, and management reports for post run analysis of job data. Future plans include the ability to scan barcodes 'on the fly' at normal run speeds, to offer 99.99 per cent 'Grade A' scans to every label.

The first user is Multi Labels in the UK, which specified the system on a 13in 8-colour Mark Andy 2200. Md Roger Monk confirms that the system is proving itself with material savings and inter-station print register to within 40-microns. 'This is unknown in rotary flexo and gives peace of mind to the printer and superb clarity to the label,' says Monk. **e No.205**

High gloss stampable UV Coating

UVitec Printing Ink has introduced a high gloss stampable UV coating, a proprietary formulation claimed to produce excellent hot stamping capability and a high gloss finish. The versatility of Coating 8038 makes it well suited for narrow web and wide web UV flexo printing, which requires good flexibility, scuff and product resistance, and fast cure response.

Uvitec says its Coating 8038 provides converters a cured film that is highly receptive to most hot stamp foils. 'The coating's hot stamp receptivity is excellent for both in-line as well as off-line printing operations. In addition to its good slip and scuff resistance, Coating 8038 maintains high gloss levels, a combination of properties that has been traditionally difficult to achieve in other hot stampable coatings.'

e No.178

e No.179

e No.138

Technology

The company says that because of outstanding through cure, presses can be run at higher speeds without the risk of coating set-off, and high quality film integrity and cured film flexibility are maintained. The coating has a long shelf life and is highly resistant to alcohol and other materials.

Coating 8038 can be modified to incorporate scanning compounds for label verification and security. As with all of UVitec's coating and inks, Coating 8038 is 'essentially' VOC free. e No.206

Thermal transfer system moves on

Matan Digital Printers (2001) Ltd has announced a new digital thermal transfer printer, the Spark 1612, which can print at widths of both 16" (40.5cm) and 12" (30.5cm). 'This enables considerable savings on consumables due to reduced ribbon and media wastage and provides an extremely productive, high-quality solution for a broad variety of indoor and outdoor applications,' says the manufacturer.

The Spark 1612 is based on the thermal transfer process implemented in Matan's Sprinter wide-format printers, which have been installed in hundreds of sites worldwide, including RIP and consumables.

The Spark 1612 is capable of printing text and graphics at 60m/hr at 400 dpi or at 30m/hour at 400x800 dpi. It can print in three-color (CMY) or four-color mode, and can utilize more than 20 Spot Colors – including gold and silver – with customized Pantone spot colors on demand. The system is designed for use on a wide variety of media, including low-cost standard substrates, with applications including industrial graphics, POP and labels.

The Spark 1612 can utilize resin ribbons for printing to vinyl, perforated window graphics, PVC, reflective materials, and other similar media. It can also use wax ribbons, for paper applications, and dye-sublimation ribbons, which print to transfer paper for later transfer onto t-shirts, ceramic tiles, wood, etc.

The RIP software features on-the-fly RIP, 180-degree rotation, and optional collate. It also supports multiple files in the same queue and allows both metric and imperial measurements for size and temperature. e No.207

MCG installs UK'S first CDI imager

MCG Graphics has installed its third Esko-Graphics CDI flexo imager and the first CDI with PowerBeam optics in the UK. The company is already one of Europe's largest users of photopolymer plate materials and the CDI PowerBeam, which operates at a speed of 4 sq metres an hour, will handle the increased demand.

'It is a reflection of the company's confidence in the ongoing developments in flexographic printing,' said Steve Buxton, sales and marketing director. 'CTP plates offer flexo printers the kind of quality, consistency and printing stability that until recently had only been available through gravure or litho printing. We expect the extra capacity to provide clients with shorter lead times.'

The CDI with PowerBeam optics images a full size 1067mm x 1524mm (42 x 60 inches) flexo plate, independent of plate thickness, in around 20 minutes.

It also features fully variable imaging resolution between 1800ppi and 2800ppi. This latest investment follows on from MCG Graphics' recent £500,000 investment in its 'front end' repro capacity, which has streamlined production systems and generated a volume increase in packaging designs to the platemaking department. e No.208

ExxonMobil film to replace wet glue

ExxonMobil Chemical has introduced Label-Lyte 85 LP-200M, a biaxially oriented polypropylene film designed to replace metallized paper in water-based, cold-glue cut and stack patch labeling applications.

Claimed by the manufacturer the first film of its kind in the industry to run on most existing paper labeling equipment without machinery or adhesive modifications, Label-Lyte 85 LP-200M is said to bring the marketing and manufacturing benefits of film to beer, wine, spirits, food and household chemical marketers.

'Label Lyte 85 LP-200M fills a void in the cold-glue patch label marketplace for a film that runs on standard water-based glues,' says Terry Jensen, senior market development manager, ExxonMobil Chemical.

Designed for use as a single web, Label-Lyte 85 LP-200M is claimed to provide excellent converting performance, including printing, sheeting, guillotine cutting and label transfer on magazine-fed labelers and Krones Topmatic labelling equipment. In testing and commercial use with several large beer marketers, Label-Lyte 85 LP-200M clocked speeds of 600 – 800 labels a minute.

In addition to speed, Label-Lyte 85 LP-200M has excellent moisture resistance and durability, according to ExxonMobil, passing 24, 48 and 72 hour ice chest testing and eliminating problems from curl, flagging, tearing and wrinkling that paper labels experience. During trials on commercial bottling equipment, Label-Lyte 85 LP-200M reduced glue usage by more than 50 per cent versus the paper label it replaced, creating a significant cost saving. e No.209

Rexor enters label foil sector

Rexor, the French manufacturer of hot stamping foils, has a new high tech foil aimed at the labels sector. Called Millenium, this new product has 'optimal characteristics of release, an excellent covering power and a good sharpness,' according to the manufacturer. It is available in a wide range of colours. e No.210

Technology

Enercon offers corona upgrade

In response to converters' and extruders' interest in positioning themselves for the future use of atmospheric plasma surface treatment, Enercon is offering its PlasmaReady upgrade program, an option available to customers who purchase new corona treater stations. With the PlasmaReady Upgrade Program converters and extruders will be positioned for a future upgrade to a variable chemistry Plasma3 station.

As new materials challenge production processes, Plasma3 technology delivers 'leading edge performance by enhancing the surface energy and treatment longevity of even the most challenging substrates,' according to Enercon.

The PlasmaReady upgrade includes all necessary station frame size modifications, as well as station preparation for variable chemistry control. Enercon says benefits include higher treatment levels, long-lasting surface activation, elimination of pin-holing, and no ozone production. **No.211**

Lightweight roll lifter for low headroom

The new Tilt Lock Model LD1-3 Tip Lift is designed to handle light rolls of paper up to 340 lbs. The lightweight model utilizes ergonomically designed handles and controls also features interlocking Safety Switches. It is claimed perfect for handling small rolls in areas with low headroom. Model LD1-3 weighs 67 lbs. and has fused power and control circuits. **No.212**

Arca adds entry level labeller

Arca Etichette SpA has added to its Entry-level series of labellers with the Dynamic, a small, light, 'wedge-shaped' design which should fit easily into any production line.

Access to the feeding unit and the application of the label reel are very easy and take just a few seconds. The Dynamic system has a maintenance-free stepping motor and advanced electronic functions managed from an integrated microprocessor.

A separate control unit, protected by a strong steel box, can be placed wherever is most convenient for the operator, up to 3 metres from the labelling machine. It can be quickly disconnected and easily replaced. It has a backlit LCD membrane keyboard. **No.213**

Dry Peel from Label Converters

Label Converters has launched its range of dry-peel labels, incorporating two layers of material with the top layer adhesive-free and the base composed of either a self-adhesive substance or non-supported.

The system is already being used by on Carlsberg, Cuba Libra and Bacardi brands.

Label Converters' sales director, Steve Sinclair comments, 'We are certain that users of dry-peel will be able to boost their share of the market, increase profits, heighten brand awareness and raise their profile. We see dry-peel as an excellent on-pack promotional vehicle. The base layer can be produced from a clear material so that when the top layer of two, for example a coupon, is removed it allows product graphics to show through but at the same time manages to avoid affecting the overall look of the product.'

Other promotional applications might include redeemable coupons, special offers and instant wins.

Dry-peel's versatility can be further enhanced by the incorporation of scratch-off panels as well as use of temperature sensitive or scratch and sniff inks. The labels can also incorporate a response mechanism for customer data collection. **No.214**

'Thinnest' smart tag claim from FN

Flying Null, the Cambridge based inventor of innovative magnetic tagging technologies, has announced the release of what they believe is the thinnest, remotely readable, non-line of sight smart tagging system in the world. At only 3-micron thick and a millimetre wide the new FN Transfer Tag is 25 times thinner then a human hair.

Developed from Flying Null's existing Electro Magnetic Identification (EMID) technology, the new tags offer users greater flexibility when choosing where to apply tags to packaging and products in the production process. The hot foil stamped tags can be laminated, embedded, applied directly to the surface, over printed or even form part of the final packaging design. Once applied these tags provide each item with a permanent ID which can be read remotely using the Flying Null hand held reader. Although thinner than Flying Null's other EMID® tags, the new Transfer Tags are claimed to offer the same durability. They can survive harsh environments varying from high temperatures at +200°C to very low temperature and many atmospheres of pressure. They can also withstand exposure to high levels of radiation, microwaves, and electrostatic and electromagnetic fields.

The tags can be supplied in various formats to cater for product authentication, batch control, warranty control or Track & Trace applications. Suitably positioned and applied the tags will also provide machine readable tamper evidence functionality. When used in tandem with other technologies FN Transfer Tags can add a covert machine-readable feature to security print features or optical technologies such as Holograms. **No215**

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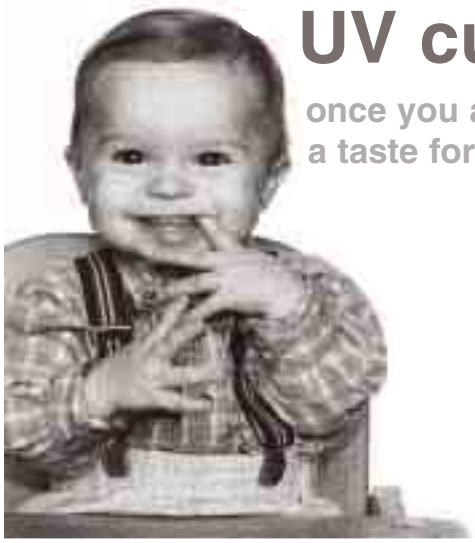

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e No.185

Technology

High shrink film from Plastic

Plastic Suppliers has announced its new 'preferentially oriented' Polyflex OPS Plus polystyrene shrink label film. The new addition to the Polyflex family of label films is claimed to provide a superior surface for ink adhesion with consistent shrinkage throughout the printing process. OPS Plus is for shaped containers requiring a high shrink label film. No.216

Adhesives are clear and tough

A new family of waterborne, pressure sensitive adhesives from National Adhesives is claimed to provide optical clarity and to resist water and humidity. Formulated for prime label applications and decals, this family of adhesives is suitable for replacing some solvent-borne adhesives.

Designated the NACOR 38-503A family of products, these specialty adhesives also resist heat, can coat well at high line speeds and are mechanically stable, according to the manufacturer. These adhesives are ideal for clear film labeling and graphic arts applications. Other benefits include good adhesion to low-surface-energy substrates and high performance in a wide range of environmental conditions.

The dry film components of NACOR 38-503A comply with the compositional requirements of the FDA, Indirect Food Contact Regulations, 21 CFR 175.105, 'Adhesives.' No.217

New press series from Allied Gear

Allied Gear and Machine Company has launched a new family of flexographic presses and rotary die cutters. The Integra press series is available in 10" and 13" web widths and targeted toward printers and converters of film, foil, paper, labels and light to medium tag stock.

Features of the Integra series presses include 40" unwind diameter, full taper unwind tension control, total modularity for maximum configuration versatility, open design for ease of operation, enclosed gear boxes, infrared drying, quick release idler rolls, 24" maximum repeat for all press functions and press speeds to 500 fpm. No.218

Avery Paris installs Prati rewinder

Avery Dennison Paris has installed a Prati Jupiter TC 400 slitter/rewinder inspection machine. The machine is capable of working and inspecting a wide range of materials including paper and films. Maximum web width is 400mm, with a maximum speed of 310 metres/minute and maximum rewinding diameter of 520mm. No.219

Xaar introduces 'blacker black'

Designed with the supermarket giants in mind, Xaar plc has launched the Black+ 'blacker than black' solvent ink. 'This ink is designed for coding and marking specialists seeking bar codes which will not fade when printed,' says the company. 'A combination of the best carbon black pigment and resin available for ink jet ensures that the ink remains a true black, easily readable by bar-code scanners, facilitating the speedy organisation of in-store inventory.'

The Black+ ink has been developed in partnership with key ink vendor, Sericol Imaging, for exclusive use with the XJ128 and XJ500 printhead series. It is geared for use on absorbent surfaces such as paper and card and the use of a low-volatility solvent allows the ink to dry rapidly once printed, speeding up the production process and reducing factory-to-shelf time for the end-user.

The Black+ ink series will not be restricted to the coding and marking sector but will be available for use in other areas of packaging. No.220

Screen white for preprinting

Sicpa has launched its new Sicura Screen 78-3 UV screen printing white ink. It is intended exclusively for pre-printing, so it has not been integrated into an ink series. The new product is highly pigmented to achieve the specified covering power for a very good white pre-print with high opacity, says Sicpa.

'Since the user does not need to add the usual leveling agents, undesired changes in the ink which would result in wetting problems or difficulties in ink transfer cannot occur,' says the manufacturer. No.221

Sato launches thermal printers

SATO America, Inc., has announced its new M-84Pro Series direct thermal/thermal transfer printers with a resolution of up to 609 dots per inch (dpi) and a print speed of up to 12 inches per second. The user easily accomplishes changes in print resolution from 203 dpi to 305 dpi or 609 dpi by simply installing the appropriate print head.

SATO's new Windows compatible M-84Pro Series with 32-Bit high-speed RISC/133 Mhz processor for maximum throughput, can print barcode, text and fine detailed graphics as well as smaller size 2-D codes such as Micro PDF417 or Micro QR, even when printing directly from standard Windows applications. Now, the ability to easily and efficiently produce labels direct from Windows applications such as WORD, EXCEL and ACCESS is an option. No.222

Label life

$12,000 DONATED TO TLMI SCHOLARSHIP FUND

Producers of Labelexpo / Labels & Labeling magazine, the Rosemont Convention Bureau, and the Donald E. Stephens Convention Center sponsored the Third Annual TLMI Scholarship Golf Challenge that was held July 15, 2002. With 72 converters and suppliers donating their time and money to contribute to TLMI's scholarship fund, this year's event was a huge success raising a total amount of $12,000. $24,000 has been donated to the scholarship fund since the first outing was held in July 2000.

This is the third year the Tag and Label Manufacturers Institute, Inc. (TLMI) has held a golf outing to help increase their scholarship fund. TLMI annually provides scholarships to college students who have expressed an interest in pursuing a future in the tag and label industry.

A special thank you to go out to Mark Andy, Water Ink Technologies, Chromas Technologies, Pillar Technologies and Hewlett-Packard for their kind donations supporting the outing. Many area hotels and restaurants also contributed to the event by providing awards for the golfers.

For further information on the next golf outing, please contact Tasha Janowski at 262.782.1900. The date for next year's outing will are be finalize and will be announced at the 2002 TLMI Annual meeting this fall.

Stephen Krogulski (L) presents Mike Dowling, TLMI president, with check

Appointments

Esko-Graphics announces the appointment of **Paul Bates** as UK and Ireland Sales Manager for Packaging. Paul first joined Barco Graphics in 1997, working in sales specialising in packaging. For ten years prior to that he pursued a career in prepress sales and production.

Paul Bates reports directly to Armand Gougay, European Sales Director for Packaging.

Max Daetwyler

Kurt Oegerli has been appointed international sales & marketing manager – Pressroom Products. He will be responsible for International sales, marketing and logistics of Pressroom products, which includes doctor blades, cleaning chemistry and pressroom capital equipment.

Marty Cansler has been appointed national sales manager – Pressroom Products. Marty will will be responsible for the Pressroom Sales Team for the United States, Mexico and Canada. This team focuses on pressroom consumable products, including doctor blades, cleaning chemistries, washing and distillation units and other capital equipment.

Johnny Stamey has been appointed technical product manager – Pressroom Products, for United States, Mexico and Canada. Stamey's new position will focus on testing doctor blade performance in pressroom situations, which gives customers the opportunity to receive 'hands-on' technical assistance for their printing issues. He will also be the answer man for the MDC email Pressroom Technical Help page.

Edale

has appointed **Adrian Morton** to the position of UK sales manager. Based in Lancashire, he will provide much needed Northern support for Edale's best-selling Alpha and Beta ranges.

Adrian's predecessor as UK sales manager, **Alan Chandler**, will be taking on a wider role as International sales manager for Edale's Web Mastery Division. In this role he will be responsible for world-wide sales of the newly launched Sigma packaging press, together with sales for the company's bespoke printing and converting solutions.

The photo caption on page 48 in the last issue of L&L incorrectly referred to the mist-reducing effect of Syl-Off 7137 High Speed Crosslinker on a solvent coating, which was being applied at a speed of 700 m/min (2300 ft/min). Syl-Off 7137 High Speed Crosslinker, manufactured by Dow Corning Corporation, is designed for use in solventless (not solvent-based) systems.

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[Amazing Power]

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