Volume 28 Issue 4

Labels & Labeling

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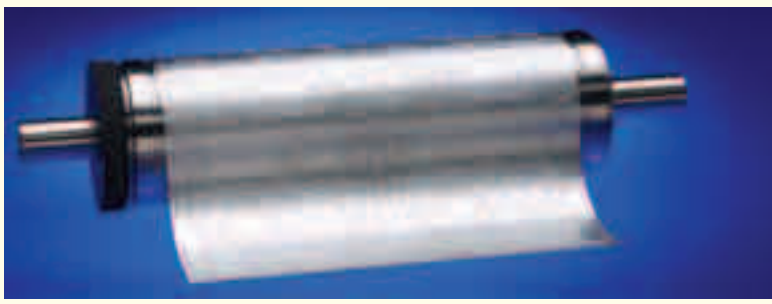

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Leader

Labelexpo Americas 2006 is set to be bigger than ever – with more exhibitors and more attendees expected than ever before at the show in Chicago. It's a reflection of the economic recovery in the US and a buoyant economy encourages innovation. You'll find a host of exciting new technologies on display that will not only enable you to run your existing business more efficiently and profitably, but may also introduce you to new market segments.

In TLMI's last study of the label market in North America, it found that converters are focused on diversification. Eighty-two per cent of the label converters they surveyed said that they were moving beyond pressure-sensitive into new applications. The fast growth rate of unsupported films for applications like shrink sleeves, flexible packaging and wraparound labels,

"Eighty-two per cent of the label converters they surveyed said that they were moving beyond pressure-sensitive into new applications"

and opportunities from cartons, RFID and smart labels, give today's converters more and more ways to beat those shrinking margins, competition from overseas and overcapacity in the industry. Those prepared to invest in the latest technology, build the right company structure and take the risks, will ultimately be the winners.

And risk will be the focus of the Labelexpo Americas conference. Entitled 'Managing risk in the 21st century', industry experts – and your peers – will offer advice on streamlining processes, increasing productivity and boosting that bottom line. Organized in association with TLMI, the conference program has a number of major label converters contributing, along with key figures from major industry vendors, to discuss issues highlighted by printers themselves.

The final day of the conference program will look at the opportunites from smart label technology and RFID. It will give you the tools to look behind the hype and analyze whether RFID is suited to your company structure or how, if you are already committed, you can make it pay.

Labelexpo predicts a number of new visitors from outside the Americas to visit the show, reflecting the industry's globalization. Delegations from Asia are expected, providing the perfect forum for converters to network and consider manufacturing partnerships.

There is certainly plenty to think about. We look forward to seeing you at Labelexpo Americas in September and hope you find the answers.

Andy Thomas
Group Managing Editor

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Labeling news

Lifetime achievement award for Calvin Frost

Voting for the Label Industry Global Awards is now closed and a panel of judges from across the label industry gathered in Warsaw on June 7 to review the nomination lists and count the votes.

The judging panel unanimously selected Calvin Frost, CEO of the Channeled Resources Group, as the winner of the R. Stanton Avery Lifetime Achievement Award. Winners of the other Award categories will be revealed on September 11 at a Gala Dinner at Labelexpo Americas 2006 in Chicago.

Calvin Frost is undoubtedly regarded as the leading international champion of recycling and environmental awareness in the label industry, devoting most of his working life and career to salvaging PSA waste and turning it into useful materials by making pressure-sensitive products more environmentally friendly. His ongoing mission is to continue to channel cost-effective and environmentally responsible solutions to global label converters and industry suppliers.

Smart label Summit comes to Amsterdam

Smart Label Summit Europe will be taking place 15-16 November in Amsterdam. The high-level conference is the only European event this year delivered by the Labelexpo Global Series and will focus on the capabilities of both smart and RFID technologies.

The autumn conference will explore the size and scope of the European smart label market and offer delegates the chance to learn about the huge opportunities available to their label businesses and customer base through adopting this state-of-the-art technology. The event will also enable delegates to network with leading experts, industry peers, and European brand owners and provide a platform for identifying new business opportunities and commercial partnerships.

Smart Label Summit Europe has attracted top speakers from some of Europe's leading brand owner organizations in the retail, pharmaceutical, IT and FMCG sectors. Experts from Pfizer, Tesco, Woolworths, Marks & Spencer, Unilever and Hewlett Packard, will be taking center stage in Amsterdam in November, to share their predictions, insights and expert advice with senior-level delegates. Chris Adcock, president of EPCglobal Inc., will deliver the keynote presentation.

A tabletop exhibition will be running alongside the conference with exhibitors from across Europe attending, including: Avery Dennison, HP, Timestrip, bielomatik, Domino Printing Sciences and Picosoft, to name a few.

Fuji acquires Dimatix

Dimatix, Inc. – formerly Spectra, Inc. – a developer and manufacturer of industrial ink jet printheads, precision micropumps and specialized print systems, has been acquired by Fuji Photo Film Co., Ltd.

'For over 20 years, Dimatix has been leading the way in piezoelectric drop-on-demand ink jet technology, and this acquisition represents the next phase in accelerating our growth. We are pleased to have such a significant role in Fuji's VISION75 strategy, which establishes new growth platforms in digital imaging,' said Dimatix CEO John Batterton.

Under the terms of the agreement, Fuji will acquire all of Dimatix's businesses, including its Spectra Printing Division, located in Lebanon, New Hampshire, and its Materials Deposition Division and MEMS fabrication facility, located in Santa Clara, California.

'Fuji's acquisition represents a significant endorsement of our technology leadership,' stated Andreas Bibl, CTO of Dimatix. 'The combination of Fuji's materials science and printing know-how with Dimatix's technology will accelerate the use of ink jetting in new and exciting applications.'

Dimatix's Spectra Printing Division develops and manufactures high-performance, piezoelectric printheads, assemblies, components and systems used in a variety of industrial and commercial printing and imaging applications, including wide format graphics, coding and marking, graphic arts, textile, mailing, and product and food decoration.

Dimatix's Materials Deposition Division innovates and manufactures systems for the development and jetting of functional fluids, including nanoparticle-based metallic and organic materials, on many types of surfaces.

Jetrion makes Aquaflex partnership and headway in European market

Aquaflex has announced a partnership with Jetrion, the Michigan-based manufacturer of industrial inkjet products and services.

Under this agreement, the two companies will co-design mounts and other critical components to optimize Jetrion's 3025 printing system for use on Aquaflex's line of flexo presses, including the new ELS Servo press.

According to Kenneth Stack, president of Jetrion, the agreement is a natural fit. 'Our investment and focus on digital printing marries nicely with the innovative press offerings from Aquaflex,' says Stack. 'And that integration will continue to show dividends. We fully expect that Aquaflex, with their in-depth knowledge of real world variable data applications, will help influence the design of future inkjet systems that will result in greater shop-floor efficiency and profitability.'

Mac Rosenbaum, Aquaflex vice president, agrees that the most important benefit is to customers - particularly those currently using Aquaflex Argio units. 'This partnership gives our Argio customers a clear upgrade path with a well-respected, state-of-the-art digital technology platform. It will offer users a level of flexibility they haven't experienced before.'

Jetrion digital printers offer widths from 2.4 to 14.4 inches, speeds up to 400 fpm with UV inks and a print resolution of up to 526x316 dpi. It gives label converters the opportunity to print variable text, barcodes, bitmaps and graphics, and is compatible with any type of flat file, such as .bmp, .tif, and pdf via a Windows-based interface.

At the same time, Jetrion has announced the appointment of Jason Oliver as managing director, Europe. Oliver, formerly director, marketing and business development for Jetrion in the United States, will relocate to Germany to head the company's fast growing ink jet business throughout Europe, Africa and the Middle East.

Jetrion's Kenneth Stack noted: 'Our business has been growing rapidly in Europe. We've had a strong demand for Jetrion's advanced products and technology, particularly for our 3000 series UV inkjet printers in the European narrow web and packaging markets. The headquartering of Jason Oliver on the Continent reflects our intense commitment to meet the ink jet requirements of our expanding customer base in Europe.'

Oliver explained the latest initiatives in the region: 'To better support our customers in Europe, we are rapidly signing up new distributors and hiring direct sales and service staff. As our customer base expands, we'll be ready with outstanding support and new products.'

The process of building Jetrion's sales and service capabilities and a network of distributors and partnerships throughout Europe is well under way. In the Czech Republic and Slovakia, TPF International recently signed on as Jetrion's distributor and will host the site of a new demonstration center in Prague for the Jetrion 3000 series ink jet printers. Oliver will announce other new European distributorships in the coming weeks. Jetrion also will be partnering with its sister company, XSYS Print Solutions, in the narrow web market, and with its parent, Flint Group, in the commercial printing/mailing market.

Skanem opens factory in Thailand

Skanem, one of Europe's largest self-adhesive label converters, is building a new factory in Thailand, a key step in the company's strategy to become a global supplier.

The deal involves building a 4,200 square meter factory on a 13,000 square meter site at Amata Nakorn, 55km south of Bangkok and 30 minutes from the new Suvarnabhumi airport. It is hoped the factory will be in production by early next year.

Skanem owner and CEO, Ole Rugland commented: 'Last year we acquired Skanem Introl and Skanem Introl-Print, based respectively in Poznan, Poland, and Moscow. Now we are moving into the Asian market and Thailand is an ideal base for us.'

The Asian market for self-adhesive labels is expanding at 20 per cent per year, and forecasts are for the Asian markets to represent 37 per cent of global label consumption by 2010.

Rugland continued, 'We began looking at the Bangkok area a year ago. We have already secured our first contract and we look forward to developing our relations with potential customers in the nearest future.' A new organization will be established during the next few months.

Skanem today operates labeling plants in seven countries – Norway, Sweden, Denmark, UK, Germany, Poland and Russia. It provides label solutions for some of the world's largest companies. It employs 1100 people in 12 printing plants and the group's total turnover in 2005 was Euro 156 million.

Labeling news

Nordic group becomes partner in PS material manufacturer Scandstick

Nordstjernan, the Nordic investment group, has reached an agreement in principle with the Fredin family whereby Nordstjernan will become a partner in Scandstick AB, the parent company of the Scandstick Group. Scandstick is a European manufacturer of self-adhesive material for the label industry. Nordstjernan will initially own 16 percent of Scandstick, with the opportunity of raising its holding to 100 percent on a stage-by-stage basis.

Scandstick's founder, Sten-Inge Fredin, will continue to serve as president and principal owner of the company, but it is hoped that the transaction will advance Scandstick's international expansion.

Scandstick, which is headquartered in Helsingborg, has annual sales of approximately SEK 850 million (€92.5M) and has shown annual growth of 23 percent over the past five years. The Group has about 200 employees and two production plants, one in Helsingborg, Sweden, and the other in Cambridge, United Kingdom. In Sweden, the company invested in a new machine in 2005 that resulted in quadrupled capacity.

'Scandstick is an exciting family business that fits in well with Nordstjernan's investment strategy,' said Tomas Billing, president of Nordstjernan. 'The company has an impressive track record of growth and we believe that the prospects for the company's continued expansion are favorable. With the new production plants in Helsingborg and Cambridge, the company is ready to strengthen its position in Europe as a leading manufacturer of state-of-the-art label material.'

'We welcome having Nordstjernan as a partner. Nordstjernan, like Scandstick, is a family business that adopts a long-term view to its investments,' said Sten-Inge Fredin, founder and president of Scandstick. 'This partnership provides Scandstick with greater financial strength and an expanded international network of contacts. With Nordstjernan as a long-term partner, we can implement our new initiatives faster and with a greater reach.'

The partners have agreed not to publicise the purchase price.

Stora Enso RFID program

The Global Speciality Papers Business Area of Stora Enso has signed an exclusive agreement with Parelec Inc. to join Parelec's Certified RFID Partner Program as a strategic partner for RFID antennae paper substrates. This exclusive program permits customers, such as major retailers, governments and transit systems worldwide, to acquire RFID antennae technology manufactured with Stora Enso's speciality papers and Parelec's Parmod conductive inks through Parelec's Certified RFID Printers. Applications include inlays, labels, packaging and other projects requiring rapid turnaround and low cost.

The companies have also initiated joint development and demonstration programs to pursue new RFID applications that utilize conductive ink and paper technologies.

'This alliance brings two leaders in their respective fields together with a common purpose, to offer the RFID market a more cost-effective and environmentally sustainable paper-based RFID antennae technology solution,' said David Diekelman, product development director of Stora Enso Global Speciality Papers. 'Partnering with Parelec allows us to combine our expertise and processes to create powerful paper RFID inlay solutions that are optimized to deliver value and performance in all facets of the RFID value chain.'

Parelec's exclusive Certified Printer and Partners Program is designed to streamline project implementation by bringing together the complete RFID value chain, from printers, substrate manufacturers, chip suppliers, attachment technologies, label makers, and custom integrators to end users. Any eligible customer who implements RFID projects can access Parelec's fully trained and certified printers who manufacture RFID labels. These printers are experienced in tag assembly operations and integration.

Harper anilox partners with Nu Tech

HarperScientific, the printing and coating supplies division of global anilox roll supplier Harper Corporation of America, has signed a partnership agreement with Nu Tech Coatings of Johnson City, Tennessee.

Through this agreement, HarperScientific will represent the full line of Nu Tech's products, including an innovative patent-pending plate cylinder coating for narrow web presses called PEC (Performance Enhancing Cylinder), which absorbs vibration. PEC is claimed to improve print quality by reducing or removing gear marks or banding, and improving tonal range. The PEC material can be applied to existing plate cylinders.

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Labeling news

Labelexpo organizer expands presence in China with strategic partnership

Tarsus Group plc, owner of Labelexpo and *Labels & Labeling*, has launched a strategic partnership with the Shanghai Modern International Exhibition Company. The Chinese partners are a subsidiary of the Shanghai World Expo Group, and the two companies will run a number of trade exhibitions and conferences in 2007 in China.

Shanghai Modern delivers industry events in the paper, packaging, printing, converting and advertising technology sectors in China. The partnership will cooperate on the following events being held in July 2007 at the Shanghai New International Expo Center: the 15th Print Pack & Paper Shanghai; the 7th PaperTech Shanghai; the 3rd Corrugating & Converting Expo; and the 14th Shanghai International Advertising Technology & Equipment Exhibition. This new collaboration will also see the launch of new events in related sectors.

Douglas Emslie, Tarsus Group managing director, said: 'We have a long-term commitment to expand our business in China and we are delighted to build on our existing presence in this fast-developing market through this strong partnership. Our combined expertise will make a significant contribution to the changing face of both the events and packaging industries in China.'

Mr Zhang, chief executive of Shanghai Modern International Exhibition Company, said: 'We are very excited about this new international partnership and look forward to working closely with the Tarsus Group to build on our successful portfolio of products here in China. Our joint strengths will help us to grow as a business, expand our existing expertise into new areas, and widen our reach in this dynamic market.'

X-Rite acquires Amazys brand GretagMacbeth

X-Rite, a global leader in color measurement solutions, has acquired Amazys Holding AG, which develops hardware, software and services to measure and communicate color under the GretagMacbeth brand. The combined company will be called X-Rite, Incorporated.

This acquisition will create a global market leader in the color industry and will generate significant synergy potential, according to the new company. 'Our new company combines top notch talent, technology and products in the color industry,' says Michael C. Ferrara, X-Rite CEO. 'We expect our expertise, talent and technology to help us expand the global color market through innovation.'

A strong team of X-Rite and GretagMacbeth executives lead the combined organization. Michael C. Ferrara is the CEO, Thomas J. Vacchiano, Jr. is the President and COO, Mary E. Chowning is the CFO, and Dr. Francis Lamy is the CTO. The X-Rite Board of Directors is now comprised of nine members, including six current directors of X-Rite and three former directors of Amazys Holding AG.

The global headquarters for the combined entity is in Grandville, Michigan, with European Headquarters in Regensdorf, Switzerland, and Asia Pacific Headquarters in Hong Kong. X-Rite will be represented by a new logo.

FINAT links India and EU

FINAT – the association representing European self-adhesive label producers – is set to take the lead in encouraging European and Indian label printers to do more business together.

Supported by a dedicated website, http://www.euro-indialabel.com/, the move to increase trade will feature a number of events between now and the end of the year. Supported by the EU Asia Invest program, the forum is being organized in cooperation with national trade associations, including VskE in Germany and LMAI in India. In August, a meeting will be held in Mumbai to explain the practical aspects of doing business with European countries and will culminate in a two-day 'matchmakers' meeting in New Delhi in December.

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Labeling news

Treofan expands Mexican BOPP plant production with US$45 million injection

Treofan Group, one of the world's leading specialty BOPP film manufacturers, has announced that it is close to doubling capacity at its North American plant in Zacapu, Mexico. Treofan will invest approximately US$45 million in expanding production and R&D facilities, including a new state-of-the-art 8.2 meter high-speed production line to be supplied by Brueckner.

'We are very pleased that we are now refocused on growth,' said Peter Briggs, CEO of Treofan. 'The additional capacity in our Zacapu plant in the Mexican state of Michoacan will support growth with key customers in strategic markets in the USA, Mexico and Canada.'

The new production line is designed to produce specialty multilayer coextruded BOPP films. This investment supports Treofan's growth strategy in specialty films for flexible packaging and label applications in the NAFTA region.

Peter Briggs added: 'With this new investment, we are entering a period of expansion following the successful restructuring of our global business. We have a clear strategy to grow our business beyond our market-leading position in Europe. This investment will give us a stronger competitive position in North America and allow us to expand the company's specialty product portfolio and better serve our North American and multinational customers.'

The current investment is fully financed by the company's existing lenders and an investor group led by Goldman Sachs. Treofan is the largest producer of BOPP film in Europe, the second largest globally, and a market leader in many of the specialty product segments and geographic regions where it is active.

Komori ups production

Six months after opening its new high technology factory in Tsukuba, Japan, Komori Corporation has geared up production to meet significant growth in demand for its offset presses worldwide.

By opening up the next phase of assembly and testing lines at Tsukuba, Komori has boosted production of its flagship Lithrone S40 B1 press. Production has also been increased at the Yamagata Plant not only to reflect the impact of the new Lithrone S29 launched at IPEX – probably Komori's most successful press debut to date – but also the popularity of the 4-color SPICA series.

At 38,500m2, the Tsukuba plant is Komori's largest factory and its capacity allows the company to keep pace with targeted increased manufacturing over the next 10-15 years. The plant combines manufacturing, assembly, testing, R&D, demo and training facilities.

GEW opens operation in India to service Asia

UK-based UV curing systems manufacturer GEW (EC) Ltd has opened the first phase of its sales, service and manufacturing operation in Mumbai, India. The facility will service the Indian sub-continent and the Southeast Asia markets. The operation is headed by CEO Dnyanesh Amonkar, an engineer with a post graduate management degree and over ten years experience with leading names in the Asian graphic arts industry.

Commenting on the start-up Amonkar explained: 'India has been a strong market for GEW and the new facility is also located in close proximity to some of the more vibrant markets within Asia Pacific. Mumbai being a commercial capital provides easy access to any destination allowing fast and efficient sales and service support. In this initial phase we will be putting together a sales and service team and building a stock of spare parts to expedite delivery to customers. At the same time we will be seeking to source labor intensive components from suppliers of repute in the Asia Pacific region. After initial evaluation and trials, our aim is to supply complete UV curing systems to the labels and packaging industry with extremely competitive and economical prices.'

GEW UK-based managing director Malcolm Rae added: 'Phase two will see the start-up of our manufacturing and assembly operations in India in around twelve months where we anticipate being a totally integrated operation with established sales and support personnel in all the major Asian markets. We will also establish staff and UV systems manufacturing in India for the sheet fed and the offset carton printing industries worldwide.'

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Loparex Group acquires Douglas-Hanson

Loparex Group, a global manufacturer of release coated papers and films, has acquired the Douglas-Hanson Company of Hammond, Wisconsin, USA. Douglas-Hanson, established in 1973, manufactures silicone-coated release papers and films, and extrudes polycoated papers for the packaging industry. The Douglas-Hanson facility will operate under the name Loparex Inc. whose headquarters are in Willowbrook, Illinois, USA.

Penti Kallio, president and CEO of Loparex Group, said, 'as a result of this acquisition, two successful release liner companies with distinct capabilities and expertise will blend together to become an even stronger supplier in the manufacture and delivery of release liner products. This merger will enable Loparex to more effectively meet the continuing challenges of providing its customers with quality release liner products and services.'

In the third quarter of 2005, Loparex Group was acquired by ABN AMRO Capital. At that time, Johan Bjurstrom, managing partner for the Nordic operation of ABN AMRO Capital, stated that ABN AMRO was attracted by the strong capabilities and global presence of the Loparex Group.

And in another move to globalize the Loparex Group, the company is strengthening its presence in Asia-Pacific with new sales offices in Japan and Thailand.

Loparex Japan KK started its operations in June and Yasuyoshi Kawabe has been nominated as sales director of this new company.

'The opening of this new company means that Loparex is now fully separated from UPM-Kymmene Corporation, and all Loparex product sales in Japan are handled through our own sales office,' confirmed Kawabe. 'Having our own sales structure in Japan is of high importance for Loparex. We want to be able to develop our operations locally and with long-term thinking, and to ensure that our Japanese customers will get the best possible service also in the future.'

Kawabe has already been in charge of selling Loparex products in Japan at UPM since 2001 – previously under Nippon Finnpap name.

In Thailand, Loparex sales are handled by a new sales office located in Bangkok. Tanarrato Tanaka, responsible for Loparex sales in Thailand, joined the company last September to establish Loparex's sales structure in Thailand. The Loparex Thailand office represents products from all Loparex Group plants.

ITW acquires specialty film manufacturer CFC

Worldwide holographic and specialty coated film manufacturer CFC International, Inc. has been acquired by an affiliate of Illinois Tool Works Inc.

Under the terms of the agreement, which was recommended by a special committee comprised entirely of independent directors of CFC and unanimously approved by CFC's Board of Directors, ITW, through a subsidiary, will acquire all outstanding shares of common stock of CFC. The transaction is expected to close in the third quarter of 2006.

The holders of approximately 58 per cent of CFC's outstanding voting common stock have adopted the merger agreement and approved the merger by written consent. As a result, no further stockholder action will be required to approve the transaction.

Roger Hruby, chairman of CFC, said, 'We believe the merger will provide enhanced value for our stockholders, and is in the best interests of the business, our employees and our customers.' Hruby further added, 'ITW is one of the most respected manufacturing companies in the United States, and CFC has a long history of providing innovative solutions for its customers. We are excited about the possibilities that ITW offers the business and its employees.'

Finat offers free English lessons

With English now established as the world's common business language, FINAT is organizing discounted English language courses for its members.

FINAT president David Harrisson announced the project at the company's annual Congress in Warsaw: 'It will help the whole industry in the move towards more globalization of the trade and will be a good course of lessons at a good price,' he said. Details from FINAT at Box 85612, 2508 Ch, The Hague, Holland. Tel +31 (70)) 312 39 10; Fax: +31 (70) 363 63 48. E-mail: info@finat.com.

Labeling news

Harper 2006 Flexo College of the Year

Global anilox roll supplier Harper Corporation of America has announced the 2006 winner of the Harper Flexo College of the Year Award: Dunwoody College of Technology, in Minneapolis, Minnesota, went home from this year's FTA Forum with the prestigious honor.

Art Ehrenberg, vice president of manufacturing operations at Harper Corporation, and Pete Hartman, Harper's vice president of sales, presented the award and trophy to Dunwoody instructor Joe Muller at the Flexographic Technical Association's 2006 FTA Forum awards banquet in Louisville, Kentucky.

Second place went to Central Piedmont Community College (CPCC), Harper Campus, in Charlotte, North Carolina. Two-time winner California Polytechnic State University, San Luis Obispo, which was the award-winner in 2004 and 2005, received third place.

'Dunwoody College consistently demonstrates an excellent flexo program,' said Ehrenberg. 'They won first place in 2003, and took third place last year.'

'This special award was created in 2002 to encourage excellence in flexographic education,' said Hartman. 'Harper is one of many proud industry participants who have contributed to this important educational effort from the association's foundation.'

Each participating school submitted an entry which was reviewed by a panel of industry veterans and judged on a variety of criteria, including creativity and organization of the information provided, flexo print samples, student perspectives on flexography, interviews with converters, and other information about the school and its printing program.

This year's judges included Wayne Fortenberry of Bryce Corporation; Bettylyn Krafft of both Krafft Printing Systems and the Phoenix Challenge Foundation; Mark Cisternino of the Foundation of the Flexographic Technical Association (FFTA); Charlotte Jones of the Career and Technology Center of Anderson; and Sonya Long of the Phoenix Challenge Foundation.

The Foundation of the Flexographic Technical Association's Flexo in Colleges program now sponsors 30 colleges that teach hands-on flexography in North America. In addition, 21 high schools are sponsored by the FFTA.

TLMI commissions USA label study

The Tag and Label Manufacturers Institute, Inc., (TLMI) Naperville, Illinois, has commissioned Alexander Watson Associates to research and publish the 2007 edition of the North American Label Study (NALS).

TLMI is North America's leading trade association serving the tag and label industry, representing more than 150 converter member companies with combined sales totaling more than 50 per cent of the industry's annual sales.

This in-depth TLMI study, updated by the association every three years, aims to inform label industry players across the value chain about the drivers shaping the pressure-sensitive label market. It also provides benchmark-level researched market data and trend information to assist companies in making business decisions critical to their growth and profitability – a strong benefit for TLMI member companies and others involved or considering participation in the North American label market.

'Publication of the North American Label Study helps to fulfill TLMI's mission of providing effective forums to address issues critical to the success of the narrow web, tag, label, packaging and converting industries of North America,' noted TLMI chairman Scott Pillsbury, president of Rose City Label, Portland, Oregon. 'We look forward to sharing this valuable information with our members and the industry as a whole.'

Present and future demand for labels in the NAFTA region – both qualitative and quantitative – will be researched for all the available converting technologies, including wet glue, pressure-sensitive, sleeves of all types, and in-mold. They are segmented by regional characteristics and the major end-use markets, from food and beverage to consumer durables, office products, and logistics applications.

Data is provided in volume terms (actual and projections), including growth rates, types of label materials and converting technologies used, and the relative position of the various labeling and product decoration technologies in each segment. End-user demand characterization will also be evaluated through an extensive series of interviews with brand owners and label users.

AWA Alexander Watson Associates is a global business-to-business market research, publishing, consulting, and events company focusing on the specialty packaging, coating, and converting industries. Publication of the 2007 TLMI North American Label Study will be in early 2007, and TLMI members will benefit from a special price.

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Labeling news

Boise's Wallula operations achieve ISO 14001 environmental certification

Boise Cascade has announced that its pulp and paper mill in Wallula, Washington, USA, has been certified as meeting ISO 14001 environmental standards. Established by the International Organization for Standardization, ISO 14001 is recognized as the leading standard for environmental management systems (EMS). 'Achieving ISO 14001 certification is a good indicator of the environmental direction Boise is taking,' said Ray Lam, environmental manager at Wallula. 'We plan to minimize our environmental footprint and, in doing so, minimize our environmental risk and costs as well.' Wallula's EMS establishes how to set clear environmental objectives, document best practices, and review them to ensure continuous improvement.

Support from Boise corporate environmental and legal personnel, along with good communication among company facilities, were important factors in Wallula's success. 'Our strong corporate audit program and learning from the experience of Boise's ISO 14001-certified paper mill in Jackson, Alabama, really helped,' Lam said.

At the same time, Boise Paper announced the donation of 319 tons of paper to the School, Home & Office Products Association (SHOPA) Kids in Need Foundation. The primary thrust behind this donation was to provide much needed print and copy paper to 16 school districts in Mississippi that were hit by Hurricane Katrina. In addition, a portion of the paper was sent to the Foundation's national network of 21 resource centers to be used in underprivileged school districts.

Intermec files lawsuit

Intermec, Inc. has filed suit against Alien Technology in the US District Court for the District of Delaware for patent infringement. Intermec alleges that Alien's Generation 2 RFID readers and tags infringe 10 Intermec patents. Intermec is seeking an injunction prohibiting Alien from selling the infringing RFID products, as well as monetary damages.

Intermec has also filed a motion to dismiss a declaratory judgment action filed by Alien in the US District Court for the District of North Dakota. Intermec is moving to dismiss the case on the ground that the North Dakota federal court does not have jurisdiction to hear the case.

In 2005 Intermec offered a Rapid Start RFID licensing program that provided access to portfolios of its RFID patents.

Avery announces eight RFID qualified converters

Avery Dennison RFID, a business unit of Avery Dennison Corporation, has announced that eight more RFID label converters have met the company's rigorous standards to become Avery Dennison 'Qualified Converters'. The converters named include: Brady Corporation; Intermec Technologies Corporation; Marnlen Management Limited; Metalcraft; Nosco, Inc.; Plitek, LLC; Repacorp Label Products; and Starport, LLC. The first wave of 17 qualified converters was announced in December, 2005.

The companies worked with Avery Dennison technical staff to comprehensively evaluate the converters' manufacturing and testing capabilities and to improve the 'converter friendliness' of Avery Dennison's RFID inlays. The company said that alignment of these capabilities is critical to ensure a high-quality, high-yield finished RFID label for end users.

'We are pleased to announce these converters as Avery Dennison Qualified Converters,' said George Reynolds, vice president of sales and marketing at Avery Dennison. 'We consider these converters to be our business partners. The high level of label converting proficiencies demonstrated by these eight companies ensures that we will confidently recommend them to end users that specify Avery Dennison RFID inlay products.'

Reynolds added: 'We are dedicated to working through the converter channel to proliferate high-quality, high-volume, low-cost RFID labels to meet the anticipated increase in demand by end users facing current and future mandates.'

Labeling news

Label Traxx integrates Green Bay stock ordering

Tailored Solutions Label Traxx management software for flexographic narrow web label printers and converters now connects directly with Green Bay Packaging, a major supplier of pressure sensitive stock.

Printers using Label Traxx can dramatically reduce order entry time by connecting directly and securely to the Green Bay Packaging order website, thus eliminating double entries and greatly reducing the risk of errors. The Green Bay Packaging system provides immediate order confirmation and advance shipment notice data. Bar codes on incoming Green Bay Packaging products are automatically pulled into Label Traxx and no scanning is necessary to maintain an accurate inventory.

In discussing the enhancement, Tailored Solutions president Ken Meinhardt commented: 'Label printers and converters now can use the most popular job management software in the industry to deal directly with another major vendor of label stock. Tailored Solutions is proud to be the first and only software provider to fill this need.'

FINAT seminar promotes self-adhesive products

FINAT is to target both global companies and niche organizations in a bid to persuade more of them to make greater use of its members' products at an Amsterdam seminar in November.

Paul Jarvis, FINAT Board member, announcing the initiative, said: 'This is a first for FINAT to reach out to the people who use self-adhesive products at the moment and to those who don't but could do in the future. The seminar will raise awareness of the benefits to users and furthermore will reinforce our authority as the representative body of the industry.

'We want to show how versatile self-adhesives can be for both primary and secondary functions and this seminar will put us well on the way to making users of labels realize that self-adhesives are the best solution.'

The seminar will be held on November 29 at the Dorint Sofitel, close to Amsterdam's Schiphol Airport.

Rhodia holds high speed coat trials

Rhodia Silicones has run successful high speed coating trials at speeds above 1,600 meters per minute, thanks to its latest generation of Silicolease release coating solutions for label and tape applications.

The combination of Rhodia's improved Silcolease Mist Reduction Additive (MRA) and new range of Silcolease cross linkers for fast-curing, achieved good quality and reliability of the coating during this high speed test run, says the company. The new generation MRA proved efficient in neutralizing the undesirable aerosol side effect known as silicone 'mist' at all running speeds, thus maximizing cost efficiency while ensuring the safety of coating operations.

The test was run on the RECO 800A high speed coating pilot machine at the Hamburg factory of Max Kroenert GmBh using Silca release base papers from Ahlstrom and Rhodia's Silcolease release coatings products.

'Our Silcolease products provide customers with higher yields while avoiding problems usually associated with high-speed coating systems,' said Karsten Schlichter, Rhodia Silicones Release Coating worldwide business manager.

Trident inkjet partners with iTi

Trident Industrial InkJet, an ITW company, has announced a partnership with imaging Technology international (iTi) of Boulder, Colorado, USA to integrate Trident's industrial inkjet printhead technology into digital manufacturing and printing solutions.

Trident's industrial inkjet printhead technology is targeted at emerging inkjet applications in sectors including flat panel displays, coatings, precision deposition of conductive and resistive fluids, and full color process printing. Trident and iTi will jointly develop an Inkjet Drive Engine (IDE) to provide an intuitive, self contained control unit for driving Trident printheads. The IDE will include software to control the printhead firing patterns, an ink supply system incorporating ink degassing, a graphical user interface and an applications programming interface (API) to enable integration of Trident printhead technology with a variety of development and production printing systems.

iTi will integrate its complete family of inkjet development tools, including the XY Materials Deposition System, Drop Watcher and the Inkjet Web Press with the Trident family of printheads. The Drop Watcher is available immediately for the 768Jet printhead.

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L&L cover

In a special project between Zeller+Gmelin, Gallus and Labels & Labeling, the front cover of this edition of Labels & Labeling was printed in-line by a combination of UV flexo and UV offset

The front cover of this edition of *Labels & Labeling* magazine was printed by a combination of UV flexo and UV offset with UV printing inks from Zeller+Gmelin on a Gallus RCS 330 press. The outside of the cover is printed UV flexo on double coated board, and the inside front cover is printed UV offset on a single coated board. The thickness of the board is 230 g/m2 (0.3 mm). The printed rolls were cross cut then sent to our printing house for binding in the usual way.

Zeller+Gmelin's Andreas Rascher commented: 'We chose a very difficult paper, with two different sides – a double coated front side and a single coated back side. The back side is very difficult to print, because it has a very high absorption capacity. The penetration of the ink is very high, therefore you can't print this material with UV flexo, because of the low viscosity. So we have to print this in UV offset. Therefore we needed a very flexible machine which could print both UV flexo and UV offset.

'The Gallus RCS 330 gave us this choice. It's an extremely flexible and multi-purpose machine system for producing top quality labels with high added value. The Gallus RCS 330 is a modular inline press with single drive technology and can be configured and retrofitted at will. The printing processes can be interchanged without separating the web. Dramatic reduction in job changeover times coupled with minimal waste were achieved thanks to high levels of automation in all modules. We needed 45 minuntes for the complete change from UV offset to UV flexo.

'For the offset print we used the ink series UVALUX U4 Xpress (4-color set). You got very good results with this ink on uncoated materials and papers with a high penetration. On the front side we used our UVAFLEX Y7 series (4-color set). It's an odor-reduced UV flexo ink series. The UV flexo varnish used on the front cover is UVALUX U0720.'

The Anilox rollers were specified as follows:

- Yellow: 320 l/cm, 4,0cm³
- Magenta: 320 l/cm, 3,8cm³
- Cyan: 360 l/cm, 3,2cm³
- Black: 320 l/cm, 5,0cm³
- Varnish: 120 l/cm, 9,0cm³
- Silver: 100 l/cm, 12,0cm³

The working width of the Gallus press is 330 mm.

The UV flexo repro and plates for the outside front cover pages were produced by COE – Carl Ostermann Erben GmbH (email: post@coe-stuttgart.de). The company used digital Dupont Fast printing plates with a 60s raster.

The repro and plates for the UV offset-printed inside front cover pages were produced by Seelitho AG (email: info@seelitho.ch, www.seelitho.ch).

Andy Thomas, L&L editor comments, 'the idea for printing this L&L front cover in-line was first discussed at Labelexpo Asia in Shanghai, when I saw a superb UV flexo calendar printed by Zeller+Gmelin using different sets of special effect UV flexo inks for each month, printed in-line on a Gallus press. This L&L front cover uses the motif from the "World Trip 2006" calendar January page. It is an excellent example of what can be achieved by today's in-line ink and press technology, and I'd like to thank both Zeller&Gmelin and Gallus for making their technologies available for this L&L cover.' ■

Zeller+Gmelin

Zeller+Gmelin is a specialist manufacturer of quality printing inks with more than 140 years of research, technology and experience. Since 1970 the company has been active in UV curing technology and is today one of the leaders in this market. Zeller+Gmelin has a number of facilities strategically positioned in the USA, UK and Europe and has a wide network of distributors worldwide. The company focuses on self-adhesive label printing, In-mold labeling and flexible packaging.

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The future's functional

While most converters sit and ponder diversification, Graphic Solutions International has already forged a path into the realm of functional printed electronics. **Katy Wight** reports

With a diversified portfolio of products including printed batteries, electro-luminescent displays, RFID tags and medical test sensors, Graphic Solutions International of Burr Ridge, Illinois, is not your average label converting company. President Suzanne Zaccone and vice president Bob Zaccone are a brother-sister team who founded the company back in 1985 and have since worked hard to push its capabilities into new realms of converting. Always slightly ahead of the curve, Suzanne and Bob have built on GSI's core business of industrial nameplates and labels to create a $23 million converting operation with a bright – and electronic – future.

Suzanne and Bob grew up around their father's label converting operation and when he sold the business, they began brokering similar applications to the product line they offer today. Initially they decided that printing their own product would be far too stressful – but they only managed to resist the temptation of converting labels themselves for six months, when they caved-in and bought their first piece of equipment. Suzanne explains that from that point onwards, GSI has continued to invest either in another piece of equipment, additional employees or larger premises every six months. The company has been in four facilities over the past 21 years and today operations are split between two different sites. The first plant holds all of the flexo and hot stamp core business and houses five presses – a Mark Andy 820 and an 830 (5-6"), two 7" Webtrons, a 13" Rotopress with six colors and a Markham hot stamp press. With so many industrial clients, a portion of the core business is screen printed and the company also recently invested in doming capabilities. These operations and their new technologies are housed in the second building. GSI's core business experienced double-digit growth in 2005, but Suzanne believes that the real growth for GSI lies in its value-added products.

'We see an opportunity for label printers,' says Suzanne. 'We have been able to take a variety of applications through our equipment and we're seeing a real trend towards functional constructions. It may not be a label, but if you can convert it through your equipment – what is the difference? We are all buying the same machinery and materials, so you need to find interesting and different things to do with what you have, and augment that with other spacialized equipment you might need.'

Ten years ago, GSI began working with a small medical start-up, to develop diabetes test sensors and today, the screen-printed sensors are manufactured 24 hours a day, six days a week. The sensor strips combine carbon and silver inks and were the company's first venture into smart labels. GSI then began to look into electro-luminescent displays.

'We found that the EL industry wanted "proof of life",' explains Suzanne. 'They wanted to work with companies that had a legacy in the industry, so we made a strategic acquisition of the assets of a Philadelphia based company three years ago. They worked predominantly for the EL night light, cell phone and auto markets (backlighting for the instrument panel and around the gear stick), and since the acquisition, GSI's EL department has expanded into backlights for PDA's and consumer electronics, backlights for medical devices and is now promoting heavily to the POP (point of purchase) display industry. GSI has two sheet fed cylinder screen printing lines for the EL business. A conductive, metalized film is laser-etched where conductivity is not needed and a layer of phosphor is printed on to the substrate, and then followed by two layers of dielectric material and a rear conductor such as carbon or silver. The phosphor layer is what lights up – the construction is basically a light emitting capacitor.

The process is extremely quality-control intensive, from the set-up of the lasers to the micro-measurements, and close checks are made to ensure that the correct amount of conductive material has been ablated.

'There is no standardization in EL,' says EL product manager Rick Mental. 'Every project that we work on is very application specific – and there are so many odd applications. EL technology has several advantages over other lighting technologies. It is cool to the touch and eliminating heat is often critical to electronics – particularly within small spaces. It also gives you uniformity of light across the product, which in turn means that it will remain uniform over time. We do a lot of work with the automotive

"We see an opportunity for label printers. We have been able to take a variety of applications through our equipment and we are seeing a trend towards functional constructions"

industry for both of these reasons. The instrument cluster is shallow and the lighting has to fit in a small area, which makes it unsuitable for standard bulbs. The EL light dims over time, but continues to provide more than sufficient lighting well beyond the 10-12 years of a vehicles design life and it must be reliable because recalls are expensive.

'These automotive projects have an 18-24 month approval cycle and there are few companies that compete in this market in the US. We've had a very different experience in the advertising/POP market though, which is subject to change right up until the last minute. That's a big deal for us because we have to redesign all the circuit levels. We have had to focus on our lead times so that we can react to last minute changes, or you just can't compete in this market.'

GSI has 14 employees working in its EL department and POP projects that they have worked on include in-store promotions for beer, soft drinks and cell phones. The EL displays are available in green, white, and blue and orange and pigments can be added or blended to make other colors. The EL market for POP is still young and electro-luminescence for packaging is even more immature.

'We have been experimenting with ink jet and digital offset to try and match the offset quality and color of packaging,' says Mental. 'The package itself isn't so much the problem – the package will work – but it is the inverter that is bulky. It's been suggested that the power for the package could be on the shelf, but then the product would not illuminate once the consumer took it home. It will happen in a high-end market like cosmetics first.

'It is difficult to create a market, so we are partnering with creative groups that are already out there, where we can augment services. The business has doubled in the past two years, we have better penetration into the market and our lead times are faster. We are also starting to get more access directly with the end users.'

New technology leader

'Further to GSI's commitment to functional printing technologies,' says Bob Zaccone, 'we recently made an important addition to staff by hiring Adam Laubach as our CTO (Chief Technology Officer). Adam brings more than 15 years of material science and applications experience gained while at Dow Chemical, including business management of a NIST funded printed electronics JV with Motorola, Xerox PARC and Xerox XRCC. He also co-led the spin-out of COMMOTION printed displays (now Aveso) out of Dow and served as managing director of COMMOTION GmbH then as CTO of Aveso.'

Moving towards the mandate

GSI's experience in printing conductive inks and coatings made it the ideal company to investigate printed antennas for RFID tags. Five years ago, it was approached by a customer to begin research in the field, which also led to a partnership with Israel-based

GSI president Suzanne Zaccone and the Tyco RFID inlay assembly machine

The EL displays are screen printed with a layer of phosphor

Power Paper, a developer of micro-power source technology and devices that are based on printed ultra-thin and flexible batteries. GSI built a battery line within its plant to manufacture them under license. The flexible batteries have a nominal voltage of 1.5V and are ideal for use in items such as smart active labels, greeting cards and board games, but GSI has had success in other niche segments such as health and beauty. It worked with Power Paper to develop a wrinkle correcting patch for a leading cosmetic end user, where the battery current helps to release a patented 'biological water' from the patch to the skin.

The cathode and anode of the battery are both screened on separate presses and it is imperative that the two inks are not mixed. Every single battery impression is tested and then coated with electrolyte. A piece of paper is positioned between the two poles prior to applying an adhesive and heat bonding them together. The paper acts as a separator so that when the battery is bent, the two poles

"Tyco provided a roll-to-roll system that allows GSI to mount flip chips, surface mount devices, and printed batteries on a web"

(anode and cathode) do not touch and it also absorbs the moisture of the electrolyte.

These batteries have become the cornerstone of GSI's RIFD solution. GSI worked with Tyco to develop a unique RFID Inlay assembly system for 1.5V and 3V battery-powered RFID tags. Tyco provided a roll-to-roll system that allows GSI to mount flip chips, surface mount devices (SMDs), and printed batteries on a continuous web of printed antennas and conductive traces. After conductive printing, the roll is fed into the Tyco machine where components are added along with one or two printed batteries. The speed of this machine allows for production levels up to 26 million inlays per year and has the ability to mount on paper, PET, or other flexible substrates, and features a variable width capability up to 20 inches (500 mm) wide. It can

Conductive inks

'Conductive inks are challenging to work with,' explains production manager Gary Gresko. 'We are always trying new inks. Even if it looks like you are achieving really good print, it might not meet the product specifications. The screening process must be very precise and you have to make sure that you have the correct thickness because it directly impacts electrical performance.'

The screen press used to print antennas has specially adapted dryers that blow hot air over the web for 105 feet! Each dryer has four temperature controls and each one is set precisely to meet stringent drying requirements. Stable and repeatable control of print parameters such as line and space resolution is critical since a gap of 5/1000s of an inch is required for the chip attachment. Electrical performance is closely monitored and a laser is used to measure the thickness of the deposit.

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"The standard passive tags are around the 20 cent range and then active tags come in at around $15 a piece, and there is nothing in between"

accommodate printed substrates from 0.002 inch (50 mm) to 0.01 inch (250 mm) thick, mount on continuous rolls with a repeat pitch of 2.0 inches (50 mm), and position chips to micron accuracy.

'We are making EPC-compliant UHF tags with a small battery source,' says Jim Parker, director of engineering. 'The standard passive tags are around the 20 cent range and then active tags come in at around $15 a piece, and there is nothing in between. With the onboard power provided by the flexible battery, an RFID tag can respond to weaker signal levels, which in effect significantly increases the read-range and accuracy. These tags will improve system performance every time you have an issue with a passive solution – for example with cans of oil and other products that are difficult to read.

'We can make 3,000 tags per hour, but that includes attaching a flip chip and 6,000 batteries. If required, we can also surface mount SMT devices such as LEDs. There are machines that are faster, but this one is far more versatile.'

GSI's RFID model differs from most other label converters who have entered the RFID market. The Tyco equipment allows GSI to pick and place silicon chips from a wafer or tape and attach them to antennas to make an inlay, whereas most converters are currently purchasing ready-made inlays from suppliers such as Alien, Omron, Avery Dennison and UPM Raflatac. This gives them another slice of the value chain.

'The RFID project has been a phenomenal investment, but Bob and Suzanne have always had the attitude that "if you build it, they will come" – as long as the proper amount of due diligence has occurred on the front end,' says production manager Gary Gresko. 'They were never ones to stick to what's working now and they have always looked to the future. They know that you shouldn't be complacent with what you have. When the economy soured, we were fortunate that we had diversified and we weren't just relying on our core business.'

Suzanne Zaccone adds: 'Bob and I are always looking for that next weird and funky thing before the market obsoletes what we are doing now. But at the present time our biggest challenge is to find a larger building that will accommodate our growth.' ■

News in brief

Smyth Companies announces press installations

Smyth Companies, Inc., one of the US's largest label printers, headquartered in Saint Paul, Minnesota, has purchased two new presses. The new equipment will increase both Smyth's roll-fed label product offering for full body shrink sleeves and pressure sensitive labels, and its sheet-fed printing for cut-and- stack paper, synthetic, and in-mold labeling applications.

The first press, destined for Smyth's Bedford, Virginia sheet-fed operation, is an eight color Mitsubishi. The press is equipped with interdeck curing and specialized feeding to handle the film materials Smyth prints for synthetic wrap and in-mold label products.

The second press, destined for Smyth's Minneapolis, MN roll-fed plant, is an Omet servo-driven, UV flexo rotary-screen press. This press, manufactured by Omet of Italy, is state-of-the-art, capable of producing high-end printing for Smyth's pressure-sensitive label, shrink-sleeve label, promotional and specialty label markets. 'This is the next step up in technology for narrow and mid-web presses,' said Bill Weernink, executive vice president of Smyth's roll-fed operations. 'This press allows us to print high quality graphics, quickly and efficiently, using servo drives and gearless technology.'

ISO approves EPC GEN 2

The International Standards Organization (ISO) has approved the EPC Gen 2 Class 1 UHF standard, a move that is expected to facilitate global RFID adoption. The new standard, largely based on input from leading RFID equipment manufacturers and end users, was published as an amendment to the ISO 18000-6 RFID air interface standard for devices operating in the 860-960MHz ISM band.

ISO's approval of the EPC GEN 2 standard provides a global technical specification for RFID devices, which should significantly break down certain region-specific UHF adoption barriers. The worldwide acceptance and credibility of ISO virtually ensures some standardization on a global platform, easing RFID integration concerns of multi-national supply chain owners and refocusing suppliers away from standards distractions and on more valuable implementations and business impact issues.

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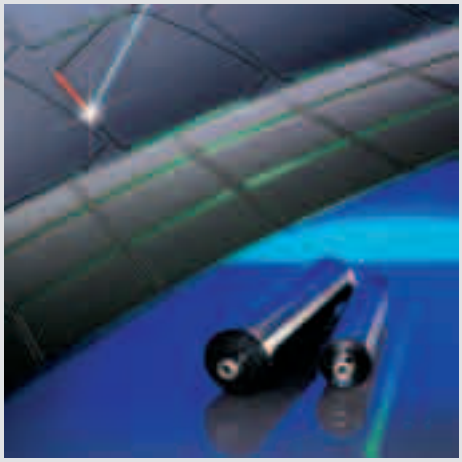

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Wisconsin's best place to work

Following three years of intensive process improvement, Tailored Label Products is reaping the rewards – and winning lots of awards. **Katy Wight** reports

There can't be anything more satisfying for a small business owner, than winning a 'best place to work' award as a result of an employee satisfaction study. Tailored Label Products of Menomonee Falls, Wisconsin, has been hailed one of the top companies to work for in southeastern Wisconsin by the Management Resource Association (MRA) – a non-profit employers' association – and Milwaukee magazine, thanks to its employees. But the accolades have not stopped there. This year, Tailored Label Products (TLP) also earned the 2005 Wisconsin Manufacturer of the Year award in the small business category, and was recently named one of the top ten businesses in Waukesha County by the Small Business Times and the Waukesha Chamber of Commerce. So why is this company suddenly so hot?

Todd Bence founded TLP back in 1984 with a partner. Todd had experience in the industrial flexo market and his business partner was more of a 'master printer' with a focus on quality and operations.

"We identified some quick hit projects where we would see a fast result and measured the outcome"

'We worked together at a label converting plant and thought that there must be a better way of running things,' says Bence. 'Lead times in this market were as long as eight and nine weeks. We started out on our own, with one press, no art department and no platemaking capabilities, but with the aim of turning jobs around in two weeks. We have built the company on a philosophy of fast service and uncompromising quality.'

Situated just west of Milwaukee, TLP grew steadily over the years servicing local industrial clients such as Harley Davidson, Rockwell Automation and Briggs & Stratton. TLP has continued

"We're trying to be inventive. We're not one of those companies trying to work out how to make three million cheese labels cheaper"

to convert PS labels and precision die cut parts for industrial clients and 65 per cent of output is sold within Wisconsin. Today the company has six Mark Andy presses in four, six and eight colors (7", 10" and 16"), 47 employees and achieves sales of over $9 million, but Bence admits that, 'the strongest growth we've seen has been over the past three years, since Mike Erwin joined the company'.

When Bence's partner sold his stake in the business, Mike Erwin, now TLP president, was keen to invest. Erwin came from a paperboard converting equipment manufacturer and brought experience of lean manufacturing with him. While TLP had excellent delivery reliability, Erwin saw an opportunity for process optimization – and his methods have had considerable success.

'I took a look around the company and assessed the situation right from the beginning,' says Erwin. 'I analyzed what we're good at and where the opportunities for improvement were. I come from a business environment where you have to be lean. In the past I worked in very secure process engineering and we sold products to the Department of Defense and Nuclear power authorities. If we did something wrong, then the products that we sold could have injured someone, so you start to build in detailed controls. This evolved into a variety of lean methods.

'We were doing a lot of lean here out of common sense, but we went ahead and trained the whole company. Then we started training people for specific skill sets and implemented more lean procedures.'

TLP worked with the Wisconsin Manufacturing Extension Partnership (WMEP), a technical and business resource to help small manufacturers improve productivity and compete more effectively in the global marketplace, on its lean initiatives. Subsidized by the state and federal government, WMEP provides cost-effective consulting for companies and has around 50 lean experts on its payroll. Rather than expending large amounts of money for a lean consultant to assess the whole business, the WMEP allows clients to buy its services one project at a time.

'We wanted to bring employee involvement to the highest level, so we identified some quick hit projects where we would see a fast result and measured the outcome,' says Erwin. 'This was to prove that it wasn't all just a fad coming from the new guy. We make a product using Tyvek and we set ourselves a number of goals so that we would have zero overproduction. We used to have two people working on this particular project and now we have one person, producing 15 per cent more per hour and they are doing all of the printing, finishing and case-packing at the press. We have grown significantly in the last year – and almost 50 per cent in the last 24 months – and we are still only shipping with one person through the use of lean organizational principles. We focused on our processes and not the results, and as we established one process that worked, we learned about how it could be applied somewhere else.'

The payback from the lean initiatives has allowed TLP to invest back in the business. It recently acquired the company it was subcontracting to print all of its digital labels, to bring that capability in-house. It has also bought new print and die cutting technology to increase its applications, although it has narrowed its focus in terms of the customers that it's serving.

'The work that we're doing is much broader than three years ago, but all of our customers have elements in common,' explains vice president Todd Bence. 'We are in bio-medical and medical, automotive, consumer electronics and testing devices, classic industrial, electronic and electronic components and we also make labels and die cut applications for the kinds of products that you get in Home Depot.'

When Mike Erwin joined the company, he spent some time speaking to high level representatives from key accounts to find out about their businesses, their plans for the future and to discuss new opportunities.

'We are investing in the long term,' he says. 'You need to have a

TLP President Mike Erwin (left) and founder Todd Bence (right)

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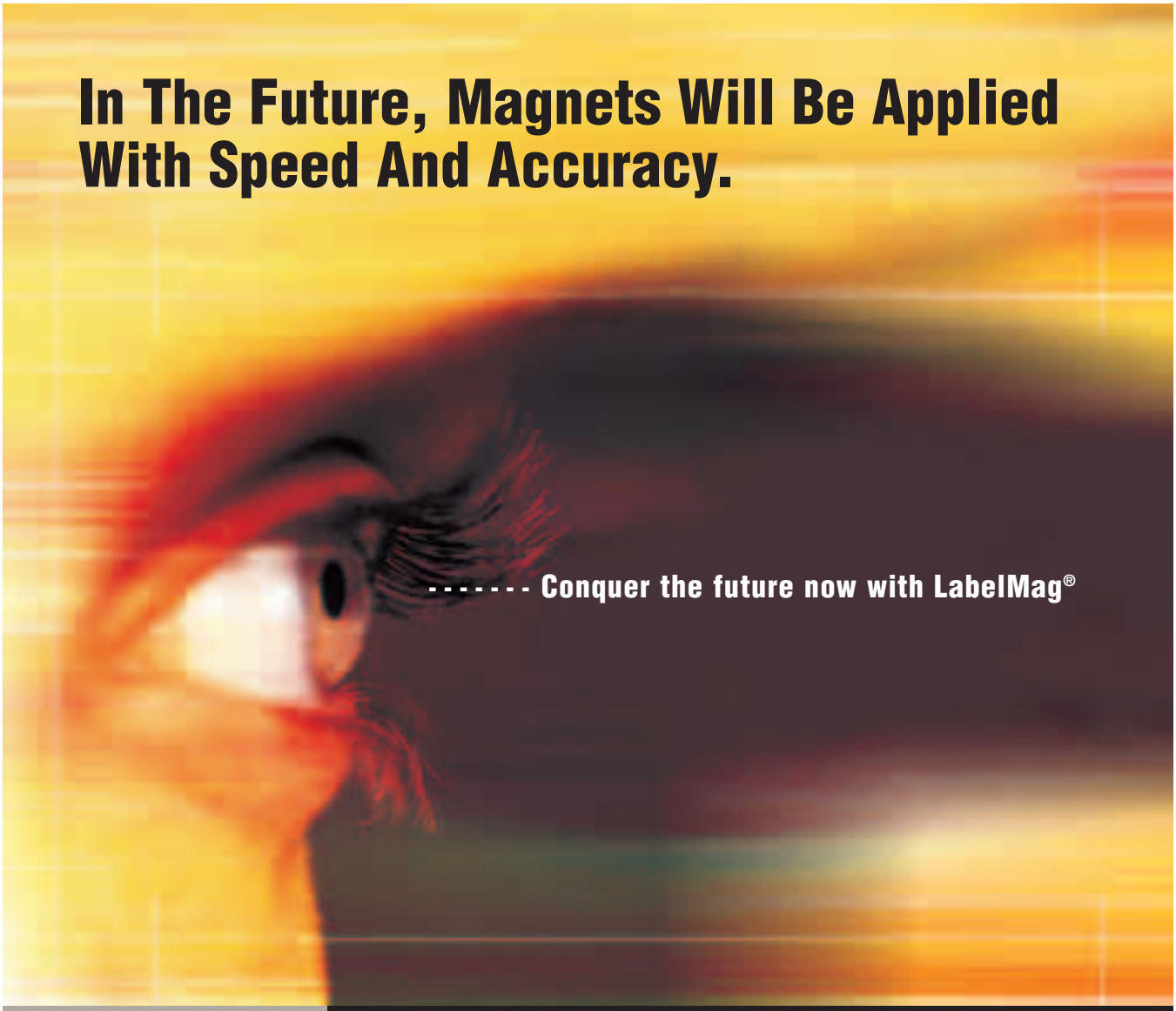

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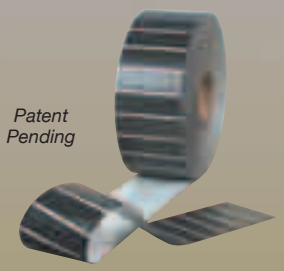

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unique plan for each client. We have tried to get into the fiber of the company and see if they are a fit for the kind of business that we do. It's all about focus and compatibility. Our growth is tied to integrated relationships with clients and each one is a different scenario. We can't be all things to all people.'

'We're trying to be inventive,' adds Bence. 'We're not one of those companies trying to work out how to make three million cheese labels cheaper. Some companies are really good at that, but it's just not us. We are the "ride to the rescue" guys. Sometimes the application that we're producing doesn't even replace a PS product, when we're replacing an existing item or device, you have to think outside the box.'

Bence explains that TLP's biggest challenge right now is keeping up with all of the opportunities they are presented with. Research and approval cycles are long and it can take a while to get new solutions signed off and out of the door, but the TLP R&D team work diligently.

Erwin and Bence's strategy for the future of the company is clear – organizational development and operational excellence. Lean projects have involved reconfiguring the plant with regards to WIP, positioning tooling, inks and coatings relative to presses, new storage and handling equipment and introducing work cells. The company will continue with ongoing lean projects and also try to increase automation in the future.

'The more that we can do things digitally, the more we can improve capacity,' says Erwin. 'We are looking into CTP and it is a big investment, but our volumes are jumping and we have made 25-30 per cent more plates this year.'

'We also want to continue to develop the team,' says Bence. 'We want to empower our employees and we look at it like we are working for them. We are helping them to become successful.' This attitude certainly helped TLP's nomination as 'best place to work' in southeastern Wisconsin. The company scored highly on its job opportunities, training, community involvement, incentives and employee retention – and even more importantly, in the employee survey.

'I've been in manufacturing for 33 years,' says Erwin, 'so it is really nice to get this recognition and our employees get a kick out of it too!'

News in brief

Fort Dearborn Company acquired by Genstar Capital

Genstar Capital, LP, has acquired Fort Dearborn Company. The total process took just three months and was overseen by a company called The Open Approach (TOA). The acquisition of the $190 million label and packaging printer gives Genstar a profitable platform company to enter this marketspace. The investment provides Fort Dearborn funding to capitalize on such new opportunities, while delivering higher returns to company shareholders and a more expansive product/service offering to its nationwide customers.

'We are extremely pleased with the potential this deal provides,' commented Mike Anderson, chief executive officer of Fort Dearborn Company. 'The Open Approach made the process seamless and beneficial to all parties. We would recommend them to any enterprise seeking ideal investments to fuel growth.'

As part of the deal, Fort Dearborn will continue to operate under the direction of its current management team. Fort Dearborn is a recognized leader in printed label solutions for the food and beverage, personal care, and household products markets. The company is headquartered in Elk Grove Village, IL, with five additional printing plants across the US.

Prairie State Group purchases PCMC press

Paper Converting Machine Company (PCMC) has announced the introduction of its 10-color, 26-inch-wide R/evolution in-line narrow web printing system. The next generation of its Evolution press, the R/evolution provides an overhead web path for better operator access and offers clients the ability to configure the press with any combination of four- and two-color press sections.

The first R/evolution was recently purchased by longtime PCMC customer, Prairie State Group of Franklin Park, Ill., which also purchased PCMC's first Evolution press in 2002. As specialists in flexible packaging using a narrow web format, Prairie State represents the primary target client for the redesigned R/evolution.

'We wanted to continue to aggressively pursue narrow web flexible packaging with a focus on high-end graphics and quick turnaround,' explained Dan Doherty, vice president of operations at Prairie State. 'I have worked with my partners—Rick Heinzen, president, and Graham Redding, executive vice president of sales and marketing—to develop product lines focused on satisfying customer needs that may have been neglected by some of our competition. We feel the Evolution and now the R/evolution is the right piece of equipment at the right time.'

“What gets you up to speed?”

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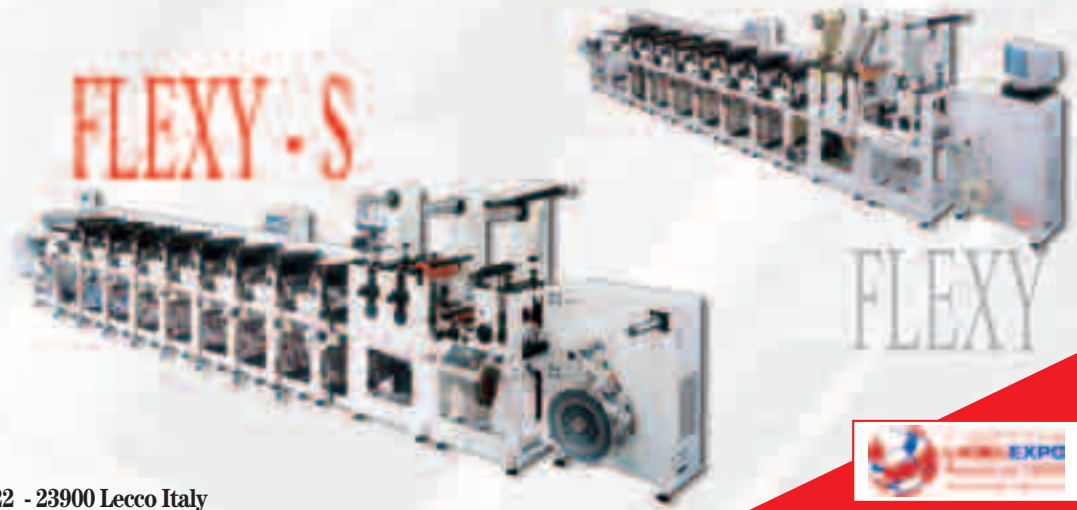

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Navigating the islands of automation

Members of the CIP4 label and packaging workgroup are pushing the gradual development of JDF standards, but when will label converters realize the benefits of total computer-integrated manufacturing? **Katy Wight** reports

The promise of JDF has dominated the printing trade press for several years now and has split the industry into two camps. The believers are confident that progress – however slow – will impact efficiency, and that JDF is the key to the future of computer-integrated manufacturing (CIM), while others are more skeptical about the specification's reach. JDF discourse tends to center around the commercial print market, but label converters in Europe and the US are just beginning to listen to the benefits of CIM and some are starting to implement islands of JDF within their workflow.

Although many specifications have been established in the commercial print segment, their equivalents in the label and packaging segment remain to be agreed upon. The JDF certification program itself is still under development and fully-functional implementations may be a long way off. Despite some commercial printers successfully introducing portions of JDF, there are still doubts about the potential of the standards. William Lamparter, president of the PrintCom Consulting Group, pessimistically wrote this year that, 'the basic structure of JDF may be flawed and never able to fully deliver on its across-the-board, multi-brand promises,' in a paper for the US Print Industries Market Information and Research Organization (PRIMIR) called 'The status of integrated automation in the commercial printing industry 2006'. In his report he complains that JDF is still not ready for broad full-function across multiple-brand equipment and asks whether the resources are actually in place for all of the interoperability tests and certification that's needed. He also highlights the problem of legacy equipment that will never be compliant and equipment that OEMs have no intention of making compliant.

But steady progress is being made and the International Cooperation for the Integration of Processes in Prepress, Press and Postpress organization (CIP4), a non-profit association established in Switzerland to define future versions of JDF, is undeterred by the challenges. With over 300 members, it's obviously not the only organization to see the potential benefits. In 2004 the CIP4 packaging and label workgroup was established and Lieven Plettinck, R&D manager for front-end software at Esko, jumped at the chance to become chair. The workgroup aims to define JDF extensions with respect to the needs of packaging and label printing workflow, as well as to create

What is JDF?

The term 'JDF' stands for job definition format and it is an XML-based data exchange specification. What does this mean? JDF is a standard language and way of communicating between pieces of equipment across the whole graphic arts industry. For example, it could provide a pathway of feedback that would enable an MIS system to give prepress instructions on the specs of a job, and prepress in turn could tell the MIS that plates are ready, and so on.

Although not all JDF specifications are certified yet, the ultimate aim of JDF is to have all software suppliers and OEMs speaking the same language for fully-fledged computer-integrated manufacturing.

Incorporating the MIS vendors
Esko has published a document of what it supports, based on the official CIP4 interface conformance spec (ICS) and to integrate, an MIS vendor needs these JDF1.3 features. Is your MIS vendor a member of CIP4 and do they speak JDF?

additional documentation about JDF based packaging and label printing workflows. An active member of CIP4 since its beginning, Esko recognized the value of JDF in its early days and has invested in the integration of JDF capabilities into Scope, its end-to-end supply chain management workflow for print and packaging service providers. Scope covers a range of functions, from job and product specification, through graphic and structural design and pre-production operations, to plate and tool-making.

Esko is working with several MIS vendors, but partnered up with Prism at IPEX in the UK at the beginning of this year to illustrate the progress that has been made in the label segment up until now. Focus so far has been on linking prepress with an MIS system – both are digitally based and can understand XML. After order-entry into an MIS system, the MIS holds a lot of information on the spec of the job – colors, web width, circumference, number up and across, and barcodes for example – which is needed in pre-production. Esko's production server is called BackStage and with a JDF workflow, the information from the MIS system instructs BackStage the job specifications automatically. These messages can be sent via JDF or JMF (job messaging format), which is a way of communicating JDF via http.

'This is a huge factor in error reduction,' explains Wim Delagrange, product manager workflow automation. 'Production staff do not have to retype any of the information from the original order, preventing prepress error on ink attributes, dot gain or distortion factors – or even worse, a label printed with a wrong barcode. When you compare the label market to commercial print, there are many more human touches. This is where mistakes occur and that can be embarrassing. But if the production server knows about the parameters of the job set-up automatically, then it will warn you if you try to do something outside of that.'

Another significant development revealed at

Esko's production server can get step & repeat information directly from the MIS

IPEX is JMF signaling, which optimizes the use of resources in prepress. The prepress system signals to the MIS via JMF every time that a milestone is reached, for example, when a one-up design is approved or when plates are ready. The MIS system can then incorporate this information into its schedule and assess the routing of jobs.

'Another feature that we have introduced is the ability to step and repeat jobs,' says Delagrange. 'In BackStage, you can upload a design file and with the barcode plug-in, the auto-workflow will go to the MIS to get the barcode information and specs, and then the job parameters are checked and it will step and repeat the label.'

The standards are currently evolving out of the commercial print industry

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What are the potential benefits of JDF?

'Every label printer wants to maximize profit on a job and get as many jobs through the plant as possible,' says Chris Wood, president of MIS vendor DiMS! 'Of course you can print faster, increase your capacity, reduce your costs or work out how to run your work smartly, and these are all good, but in the past there has not been much focus on overheads. What about the cost of getting jobs through sales, customer service and into prepress and production? We want to make sure that everyone has the same information all the way through the value chain. Everyone talks about press efficiency, but there is also an untapped area of profitability in process. That's what JDF is all about – it is the removal of the non-value added processes and more accurate information.

'Across the whole print industry there is a general move to shorter run lengths. Many companies are struggling because short runs take as much admin as long runs. If you are completing 100 orders a day, your processing costs will go up and JDF could represent big savings. JDF is further ahead in commercial print – particularly in sheetfed – but it is still in the early adoption phase. The web-fed industry has not made much headway and not just because the specifications are incomplete. If you are running very long runs, then why automate? You are only saving a matter of minutes. But label printers, who are increasingly facing shorter runs would be a prime target for JDF.'

and where the specifications do not meet label-converting processes, the CIP4 packaging and labels workgroup has been and still is extending the specification. Flexo distortion, step and repeat and barcode verification are all unique aspects of the label and packaging segment and were proposed to be integrated in the JDF1.3 standard. The JDF1.3 standard was released in September of last year.

'In the road ahead, MIS is the center of the universe,' says Delagrange. 'At this point in time we are looking into implementation in three areas: MIS and prepress; MIS with press and finishing; and prepress and finishing equipment. There has been a lot of interest in linking prepress to finishing in the digital industry and we are working with ABG International to link the Sabre Xtreme laser die cutter with an HP digital press.'

This isn't just talk or theory. Steve Balderson and his team at Adare Label Converters, in Suffolk, UK, are already realizing the benefits of the beginnings of JDF connectivity. A common customer of both Prism and Esko, Adare has integrated its MIS system with prepress and eventually intends to extend JDF connectivity right throughout the factory

'We are firm believers in optimizing workflow through new technology,' says Balderson. 'We are generating virtual job bags and as we pass certain milestones in the production process, it will automatically update to the MIS. Customer service loads the job bag and it appears in prepress – there is a single keying solution and all of the information is transferred seamlessly. Once prepress has been achieved, there is a number of triggers – generation of the PDF, to proofs, to plates – that all talk to the MIS system. We are creating a virtual production board which is automatically updated.'

The company is in final training with Esko and hopes that the whole project will go live in August. A Prism beta-site, Adare intends to work closely with its suppliers on further JDF projects.

'We are working towards a system where customer service could upload the job specs, step and repeat the file and pick the cutter, without prepress even being involved,' explains Balderson. 'We're not quite there yet, but we are very pleased with all of the progress that we have made so far. I believe that JDF will be quite far-reaching and we are looking towards digital asset and project management that is all linked to JDF.

'It's not a complete standard just yet – there are lots of different "flavors" to choose from and you can take what you need as you grow.'

The true benefit of JDF really lies in its potential. As more and more OEMs and software manufacturers become compliant, workflows will become increasingly computerized – making for leaner manufacturing.

'We must avoid the misunderstanding that this is one big miracle solution,' says Delagrange. 'The benefits of integration will keep on coming and coming, and JDF will rule the world when we can appreciate its full value proposition.'

Perhaps so in the world of offset, digital printing and digital finishing, where print is consistent and repeatable. Not one flexo press manufacturer has openly made a commitment to JDF and it's not surprising – with so many variables involved in the process, full integration could be tricky.

Chris Wood, president of MIS vendor DiMS!, believes that although JDF presents a big potential opportunity, many converters still have a lot of work to do in streamlining processes before they even think about JDF connectivity.

'First step,' he says, 'figure out what your processes are and secondly automate as much as you can – invoices, estimating, digital prepress. JDF can be part of your automation phase, but implementing these two steps first would reap benefits for many converters. There is no point in automating a bad process.

'Speak to both your MIS and your prepress vendor. You might find it's not actually the best way to improve your processes or you might find that your existing equipment just isn't compatible.' ■

Claim your gift from Uncle Sam

Make sure that you know the tax benefits tied to capital equipment investment before you buy that press at Labelexpo Americas this year. **Linda Reed** of National City Commercial Capital reports

Confidence in the US economy is finally here. It is confirmed by the almost daily increase of the Treasury Bills and quarterly increase of Prime Rate. Oddly enough, though none of us like to see the cost of money go up, we are all happy that the economic steam engine has perked up and is chugging right along – and thankfully better than last year.

But there is a little problem. With increased confidence and the purchase of more efficient equipment comes more profit! And that's a problem? Well, only at tax time.

Uncle Sam has decided he will help boost the morale of corporate America by extending and increasing the tax benefits of Tax Code Section 179 through the end of 2006. Business owners who purchase capital equipment, i.e. machinery, testing equipment, computers, prefer to write off the cost of the equipment the year it was installed rather than over a five to 15 year term. The temporarily modified Section 179 allows you to deduct more depreciation than you can under the usual Tax Code Section 179.

This tax code is geared for businesses that spend less than $430,000 in 2006 on equipment and allows them to write off up to $108,000 this year. To qualify, the equipment has to be new equipment, installed by end of 2006 and is reflected as an asset on the company's financials. Examples of a capitalized lease include $1.00 buyout and a 10 per cent Purchase upon Termination (a/k/a 'PUT').

For companies that purchase and install equipment in excess of $430,000 in 2006, the tax deduction is reduced dollar-for-dollar over the $430,000 mark. It should be noted that a company can not reduce their taxable income below zero.

Another consideration when purchasing your new plant equipment is to finance it via a tax lease/true lease. This type of program allows the lender to retain ownership of the equipment and the lessee (the customer) to write off the entire monthly payment as an expense item. This type of finance program would have a purchase option of 10 per cent of the original equipment cost or a fair market value.

As you navigate through the purchase of your new production equipment, don't forget the tax advantages. By financing it, you are allowing the equipment to pay for itself as well as a little help from good old Uncle Sam. Take advantage of this gift – it's only good for this year.

Contact your CPA, tax advisor or simply visit www.irs.gov and reference Form 4562.

Linda Reed has been in the lending industry for over 22 years, specializing in the printing and packaging industries.

Example:

Equipment Cost:	$250,000.00
First Year Write Off Under Section 179	$108,000.00
Normal First Year Depreciation (Usually 20%) ($250,000.00 - $108,000.00 = $117,000 X 20% = $23,400)	$ 23,400.00
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Lightning fast labels

How does a label converting company with no external sales force, run by a management team with no printing experience, achieve annual sales of $2 million within four years? **Katy Wight** reports

Lightning Labels of Denver, Colorado, is not a conventional label converting company. A purely-digital operation, it has not only harnessed the very latest in label printing technology, but it is also promoting its business primarily over the internet. Run an internet search for labels in the US, and Lightning Labels is likely to appear as one of your options. The company has successfully captured a slice of the short-run market since it was founded in 2002 and is on target to achieve over $2 million in sales in 2006 – not a bad feat considering its founder and the company president had no experience of label printing before they began their endeavor. The nature of digital print technology – its consistency and repeatability – has paved the way for a new brand of label converting entrepreneurs who have little need for knowledge of conventional print techniques.

Lightning Labels founder and director of business development Peter Renton grew up in Sydney, Australia, where his father owned and ran a label catalog business. The catalog contained a wide range of generic labels for businesses bearing slogans such as 'past due accounts' or 'thanks for your business', that he would sell and outsource to various label printers. Despite studying computer science at university, Peter joined the family business after graduation and eventually bought it from his father. In 1991 he decided to take the business model to the US, and his brother took over the Australian branch.

'We used to outsource all of our label catalog work to flexo,' explains Renton, 'but in 2001, our major converter supplier, who printed 150 varieties for us, went bankrupt. I had just seen the Indigo Omnius press at Print '01 in Chicago and I immediately thought that it would be a great opportunity for us, so I decided to start a new company. Eventually I sold the label catalog business to focus fulltime on Lightning Labels, because it had grown to double the size of the original company.'

Peter had only had to manage four employees at the label catalog company, so he started to look for someone to grow the business.

In 2004, he approached Lightning Labels' current president Steve Smith to join him in partnership and lead the growth. Smith is a fellow Australian who spent 30 years of his career in the IT industry, specializing predominantly in 'search' – experience that Lightning Labels has really been able to take advantage of for their internet marketing. Both Smith and Renton admit they have a different approach than most label converters, but they are able to use this to their advantage.

'I think that our backgrounds in IT have really helped,' says Renton. 'Rather than being scared by technology developments, we embrace them. I think that it also helps from a business management perspective.'

Following the initial investment of an Indigo Omnius, they bought their second press – an HP Indigo ws2000 – in October of last year and have teamed the presses with an offline Vericut finishing system by Rotoflex. The company has grown fast and currently has fifteen employees servicing a niche customer base focused on quality short runs.

"The company is on target to achieve over $2 million in sales in 2006 – not bad considering its founder and the company president had no experience of label printing"

'The vast majority of our customers are small businesses that are trying to get into their respective markets, but can't justify the cost of a long run. We work for the real mom and pop shops. We do work with a small number of brokers, but most of the labels that we print go direct to customers,' says Peter. The bulk of the orders that the company receives are multi-version.

The HP Indigo ws 2000 press

"We keep all of our pricing online and transparent, but the instant quote is such a powerful tool for our customers. We think it probably saves us about three employees"

Certain industries, such as nutraceuticals, where labels are constantly being updated and changed due to different regulations, are Lightning Labels' ideal target market, but the company also services some larger clients who appreciate the quality and the fast turnaround. Sales are predominantly within North America, but the company has shipped all over the world and is currently working on a project with an end user in Norway.

Lightning is beginning to build up a large customer base of repeat business, but a staggering 90 per cent of new business is generated by the company's website and presence on the internet.

'Steve has fifteen years of experience with search engines so we focus on them and I think that it gives us a competitive advantage,' says Renton. 'We have leveraged our IT backgrounds for several years now.'

'It's no secret that the internet can be a powerful tool in marketing, but the challenge lies in how you harness that,' adds Smith. 'We are successfully doing it, but I am not about to tell you how! You have got to invest in all of the approaches and processes that are going to work for you. We don't have a sales force to compensate, so we plough all of that cash into internet marketing.'

Despite having no external sales force, the company has grown 50 per cent year-on-year for the last three years and is set to achieve the same increment in 2006. In fact, Smith explains that one of the biggest challenges that Lightning Labels faces, is managing growth. At present, the production department handles over 20 jobs per day – although a single job could obviously have many different label design variations. The team at Lightning has worked hard to try and keep down the administrative costs and processing time to a minimum for short runs.

'We have done a lot of research in management software and looked for a package dedicated to digital label printers, but it just doesn't exist. There are lots of print shop tools that are perfect for the web-fed offset and flexo markets, but nothing for digital – so we wrote our own. Without it, I think we'd be dead! The software takes a large chunk of the processing and automates it.'

Part of this software includes an online estimating tool, which enables customers to get a quote in seconds. 'We keep all of our pricing online and transparent,' explains Smith, 'but the instant quote is such a powerful tool for our customers. No one that we know has got anything close to this and we think it probably saves us about three employees because we get literally hundreds of different quote requests everyday.

'We're not scared that our competitors can see our pricing. We are just trying to make the customer experience as easy as possible. There are other companies trying to do the same thing, but it is not just about hiring a programmer, it's having an entire business plan based around this technology.'

Renton and Smith admit that they might not be the cheapest option, but enabling end users to order smaller quantities can be attractive, as it allows the customer to manage his cashflow better. Observers of the digital market will have noticed the enormous price variations between companies – many of whom have little idea of how to charge for their services – but Lightning Labels is committed to remaining competitive and recently moved to the HP Indigo 'click charge' pricing model, which Smith says, 'is more consistent with our costs'.

After investing in the first Indigo press, Lightning Label decided to stick with the same platform and technology by buying an HP Indigo ws2000. The press is to a large extent the updated Omnius model renamed after HP acquired Indigo. This enabled them to share spare parts and also minimize operator

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Products News

RITRAMA'S NEW INDIGO RANGE

The increasing need to make short economic runs has forced the label printer to look for new solutions and digital printing is one answer to this. With their new range, Ritrama can meet the demands of the market. The range features a selection of both paper and filmic materials all with excellent printability.

WINE LABEL RANGE

Ritrama have enhanced their Wine Label Range with new interesting alternatives. The range consists of different kinds of wet strength papers (matt, glossy embossed etc.).

DURABLE PRODUCT RANGE

The Ritrama Group has rationalized the product portfolio in order to satisfy customer needs. The Durable product range is specially designed for the automotive industry and electronic or household appliances. The Durable range guarantees the same lifespan of the label as the object to which it is applied, to ensure that the printed information will be always readable.

CLEARFLEX

The Clear Solution from Ritrama is a new concept in clear labelling: Clearflex combines the squeezability of PE films with the clarity of PP films. Clearflex is a 50my gloss squeezable bioriented clear polypropylene suitable for flexible containers in the Health & Beauty care field and for "No Label Look" applications.

Events & News

LABELEXPO Americas 2006

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NEW NUMBERS

Ritrama is pleased to announce the NEW slitting, logistic and R&D centre in Caponago (Milano). The Caponago facility will also house Ritrama's corporate head quarters. This distribution hub will operate with a fully automated warehouse and robotized packaging system slitting on demand for customers across Europe.

NEW PRODUCT LINE IN SASSOFERRATO

To answer the increasing demand for PSA-materials, Ritrama has installed a new 2-meter wide coating line in their Sassoferrato production facility.

NEW DISTRIBUTION CENTRE IN BARCELONA

Ritrama announce the opening of the new distribution centre in Barcelona (Spain).

ISO 9001 Certified Companies

Lightning Labels' president Steve Smith (left)and founder Peter Renton (right)

training. They decided not to opt for the high-end ws4050 model – and not only because of its cost.

'You may be doubling your speed with the ws4050, but you still have the same prepress and set-up for each job and our print runs are so small that you're not even going to save that much time. Our average run is only 150 feet of material, so you're only going to save yourself a couple of minutes. We might think about the ws4050 if it were half the price though!'

Another driving factor behind the second acquisition was having a back-up press when scheduled and unscheduled maintenance cropped up. Lightning Labels works a single shift, so with both presses it has plenty more capacity if its growth rate continues. However, they are always on the lookout for new technology that will address challenges that they face now.

'We haven't yet worked out how to cater to the people that want 50 labels,' explains Renton. 'The ws2000 is an expensive piece of equipment and people can get disappointed by the cost of the very short runs. You still have prepress, so a lot of effort goes into a 50 label run. We are definitely watching the developments in that part of the market though.'

Lightning Labels by nature is always on the look out for technology advancements: 'We try and keep one step ahead,' says Smith. 'The internet changes so fast and there are always new opportunities out there. We are focused on leveraging new opportunities within that model. We're not afraid of technology or change.' ■

News in brief

Frederick Baer of PCMC retires

Frederick 'Rick' Baer, executive vice president of corporate development at Paper Converting Machine Company (PCMC), has retired from his duties with PCMC. He has also accepted an invitation to join the board of directors of PCMC's parent company, Barry-Wehmiller Companies, Inc. of St. Louis, from Barry-Wehmiller Chairman and CEO Robert Chapman.

The PCMC business has been in the Baer family for three generations and was purchased by Barry-Wehmiller in October 2005. Under the terms of the agreement, the Baer family has a significant investment in Barry-Wehmiller stock, along with the Chapman family and more than 200 other employees, directors and investors.

'Following the close of the sale of PCMC to Barry-Wehmiller, I thought it important to continue with the company to ensure a smooth transition and to offer historical perspective and counsel to the new management of the company,' Baer stated. 'I believe that the transition has gone very well and that, today, PCMC has a sustainable business model that is enabling the company to operate profitably, both now and into the future.'

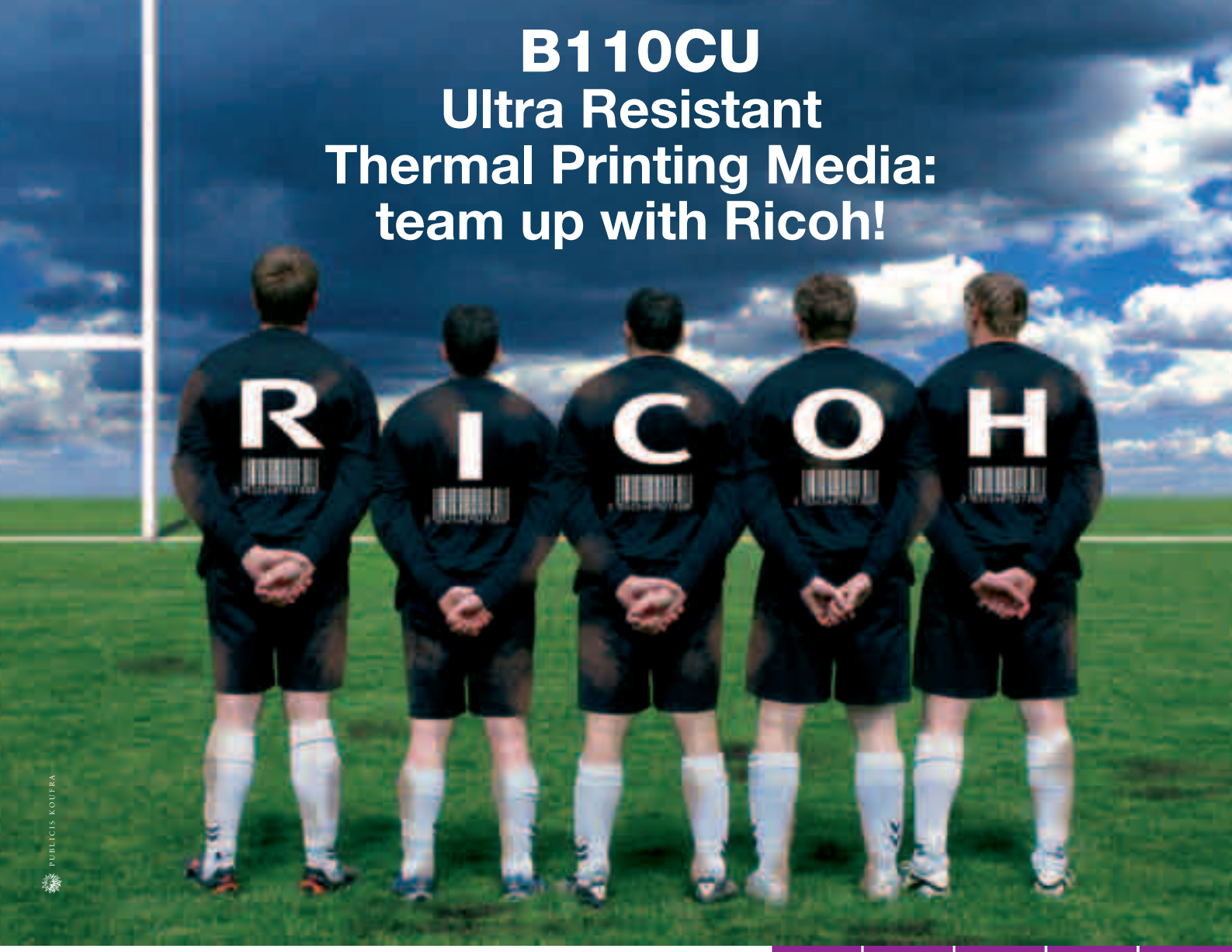
GiDue appoints agent for Turkey

Italian press and converting equipment manufacturer GiDue S.p.A has announced the appointment of IMEX Group as its agent for Turkey. The appointment reflects the company's desire to increase brand perception of its diverse range of products in the region through a company that shares similar marketing objectives.

Based in Istanbul, the heart of the Turkish economy, IMEX Group also has offices located in Izmir and Tehran covering neighboring areas including Syria and Azerbaijan. The company has been in the label business for four years and supplies the fast growing Turkish market with a wide range of products for the labels, packaging and folding carton industries. The increasing demand for high quality packaging technology in Turkey is fuelling the demand for new printing and converting equipment and the cooperation with GiDue will enable IMEX Group to meet this need.

The cooperation between the two companies will both add value to the GiDue brand and enable IMEX Group to reach potential GiDue customers. Mert Gonec general manager of IMEX Group, commented. 'The greatest advantage in marketing GIDUE machines is the ability to propose a specific configuration according to customer needs.'

B110CU
Ultra Resistant Thermal Printing Media: team up with Ricoh!



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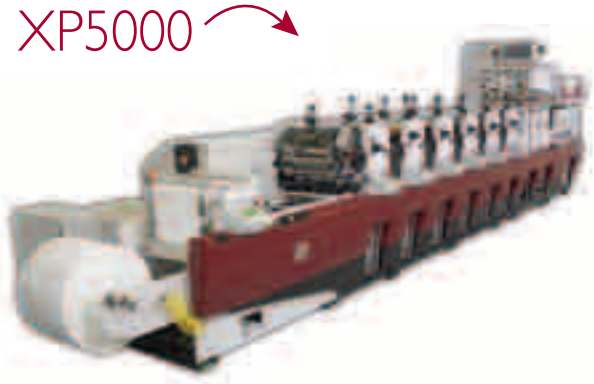
XP5000



When you're a leading label converter, the only standards you can exceed are your own. That's what Mark Andy has done with the new XP5000. The touch screen and ergonomic design make it much more intuitive and easier to run. Dozens of other innovations, such as the Power of Servo, combine to make it run faster and smoother. You'll feel the difference immediately. When the job is done in record time, producing consistent quality and minimal waste, you'll see it too.

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Building in savings

GE Plastics has helped FLEXcon reduce the system costs of barcode labelstock, while delivering a 98:100 print contrast ratio. **L&L** reports

To track electronic or automotive components with speed and precision, manufacturers need bar code labels that can be read accurately the first time. To achieve this, the labels must be opaque to prevent the substrate under the label from showing through, and provide a sharp contrast to the bar code printing. Traditionally, producers of bar code label stock apply a white surface treatment to translucent, high-temperature films to improve opacity, print contrast, and durability. However, FLEXcon, a leading global manufacturer of pressure-sensitive films and adhesives, identified a need for a label material that did not require an opaque surface treatment.

GE Plastics and FLEXcon

The challenge: achieving a competitive advantage through material innovation

FLEXcon, a Spencer, Mass.-based manufacturer, faced a dilemma involving the cost of producing bar code label stock used for tracking electronic and automotive components. To ensure the bar codes could be read correctly on the first pass through the scanner, the film had to be modified with an opaque, white coating to prevent the substrate under the label from showing through and improve print contrast. As part of its continuous improvement strategy, FLEXcon proactively examined ways to add value to the bar code label manufacturing process for greater productivity. The company targeted elimination of the opaque surface coating, which would reduce the number of steps needed to achieve required performance. However, FLEXcon needed a new way to supply the necessary opacity and print contrast.

FLEXcon turned to GE Plastics for a film with opacity 'built in' to eliminate the coating step. However, opacity and print contrast were only two of the requirements for this new material. It had to be flame retardant and resistant to high temperatures for use in electronics and under-hood automotive applications. And it had to have a very smooth surface to allow application of a thin, clear coating needed to ensure receptivity of different printing inks to the label stock.

Opacity and print contrast were only two of the requirements for this new film – it also had to be flame-retardant and resistant to high temperatures

The solution: GE's Flame-Retardant, Pigmented Ultem WH217 Film

Working closely with FLEXcon, which contributed technical expertise and field testing, GE developed a new pigmented grade of its Ultem polyetherimide (PEI) film. In addition to being opaque, GE's White Ultem WH217 film is inherently flame-retardant, making it an ideal candidate for electronic labeling, printed circuit board marking, and other applications. Flame retardance is lacking in many competitive high-performance films. And the GE material provides higher temperature resistance and better dimensional stability than other high-temperature films.

According to John Bennett, vice president of the Product Identification Team for FLEXcon, 'The value of GE's Ultem film is its unusual combination of whiteness, surface smoothness, and high heat resistance.'

The benefits: high performance with reduced system cost

The development of pre-colored Ultem WH217 film gave FLEXcon a fresh alternative to traditional translucent films that require a secondary white coating for bar code label stock. The GE material delivers a high opacity level of approximately 85 percent, which hides background material and enhances readability of the bar code. In fact, the GE film provides a print contrast ratio of 98 out of 100.

'With White Ultem film, manufacturers like FLEXcon no longer need opaque surface treatments to achieve high opacity and print contrast – and that saves time and money,' said Nick Abbatiello, GE Plastics industry manager. 'FLEXcon and GE share the goal of bringing innovation to customers.'

In addition, GE's Ultem WH217 film meets UL 94 VTMO flame requirements without the use of brominated or chlorinated additives, enabling the material to comply with European Restriction of Hazardous Substances (RoHS) standards. It offers excellent tear strength to prevent label damage during processing, and high temperature resistance for demanding applications such as printed circuit boards.

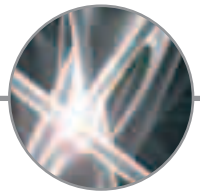
"With White Ultem film, manufacturers like FLEXcon no longer need opaque surface treatments to achieve high opacity and print contrast"

For label manufacturers, GE's Ultem WH217 film provides consistent thickness (+/- 10 per cent gauge control at 50 μm) that helps ensure even application of label adhesive or clear coatings that may be needed for print receptivity with certain inks.

Abbatiello explained, 'The smooth surface of our Ultem film allows the label stock manufacturer to achieve the desired result using a very thin surface treatment. This avoids the need to make multiple passes through the coater for a thicker layer – and that means shorter cycle times.'

Flexcon's Bennett concluded, 'We believe the new Ultem product can meet our customers' needs with superb performance and lower cost.' ■

There's a little secret behind great labels



* Our release base papers and face-stock label papers make sure big brands stand out. They ensure that the highest quality pressure-sensitive labels are printed, cut and applied swiftly and smoothly. So it's not surprising that they look so special, too!
If you are in the pressure-sensitive business, you know you can count on our papers. We invest continuously in new production capacity and product quality to provide reliable support for your growth. Wherever you are.

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Harlands and Intercoat — a successful long term relationship

HARLANDS
LABELS

Harlands of Hull Ltd is one of Europe's premier Label converters, supplying demanding markets where technical support and consistent quality is a prerequisite.

Harlands has demonstrated the ability to deliver such requirements over many decades and is synonymous with innovation and Brand reputation, with clients such as Avon , The Body shop , Chivas Regal and Whyte and Mackay to name but a few.

For Harlands to continue its success and development it is essential to have real partnerships with like minded suppliers, operations who themselves can offer technical development as well as commercial advantages. Since opening a Polish operation, this has been even more critical with the willingness and drive to support both facilities becoming very important.

Supply chain partners are key to Harlands, and Intercoat together with UK operation Sisa have played an integral part in Harlands increasing market share over the past few years.

Supply chain partners are key to Harlands, and Intercoat together with UK operation Sisa have played an integral part in Harlands increasing market share over the past few years. The partnership has flourished as positive dialogue between the companies has brought about more creative ways of doing business, ensuring improved response times, and lower capital exposure.

Harlands operation in Lublin , south east of Warsaw is also benefiting from the strong understanding built up in the UK over the past few years and has been able to standardise on specifications regardless of which manufacturing plant is utilised for production.

Harlands primarily converts filmic materials for use in the Health and Beauty and Drinks sectors, where not only aesthetics are important but also the technical performance of the label both at point of application and during its market life cycle which at times can be very rigorous.
The selection of material constructions , surface coatings, adhesives and backing liner options all play an essential role in the process of determining specifications. This is a sometimes lengthy process undertaken by Harlands, together with its customers, Intercoat and Sisa work together to ensure the ultimate mix of components is harnessed to provide optimum results.

Harlands are part of the Clondalkin Group, operating throughout Europe and North America with a global turnover of some 800,000 Euros.

The Harlands production center in Poland commenced operations last year. Within a few months they not only changed from one to two shift production but also achieved the ISO 9001 Certification.

Sisa uk
Specialists in Self-Adhesives
Specialist Solutions With a Superior Service

INTERCOAT

Due to the intense supply chain demands Harlands decided to work with partners who could supply high quality materials, a 'tried and tested' end to end service agreement with SISA (UK) Ltd (agent for Intercoat within the UK) and an acceptable delivery charter that also harmonizes European pricing levels.


Adrian Hardy

As Ian Wright previously mentioned, Harlands as a global player require dedicated Supply Chain Partners like SISA (UK) Ltd to support such an investment.
With the combined knowledge of the industry and a previous track record SISA (UK) Ltd has developed a strategic and successful relationship with Harlands UK. Through close negotiations with Ian Wright, Adrian Hardy (MD & owner, SISA (UK) Ltd – formerly Intercoat UK Ltd) and Tony Harman (Intercoat's Sales & Marketing Director) Intercoat were able to nurture an effective arrangement in Lublin; the production site of Harlands in Poland.

Whilst SISA (UK) Ltd have worked to continually improve business operations with Harlands UK (through process investments and a dedicated partnership), Intercoat have driven the business forward in Poland with the assistance of Miss Beate Fischer. Beate, whom since joining Intercoat has developed extremely good relationships with her European contacts is well regarded within the Industry.
Comment from Tony Harman "Beate joined us during a very precarious period and has worked hard to bring stability and respect to business relationships formed previously with Intercoat. I am personally very proud that Beate concentrates and implements a professional style in this overly demanding business climate. Intercoat look forward to many more successful years together focusing Beate`s almost endless enthusiasm".


Beate Fischer

Harlands are specialist label printers with sites in the UK and Poland. The company is part of Clondalkin the international packaging group.

Today, Harlands in Poland are manufacturing with the Intercoat Key Product "Clear on Clear" (PP 60 µm, high gloss with a PET Liner and a high transparent High-Shear adhesive for the "No Label Look"). Since production in Poland started, Intercoat is supplying this high quality product to Harlands, who are using the servo assisted MPS flexo / screen combination press on which they are producing high quality work for customers such as Avon in upto 9 colors.

Today, Harlands in Poland are manufacturing with the Intercoat Key Product "Clear on Clear"

Avon Senses

Intercoat started with direct delivery and developed this into a Consignment stock within the factory to signify our commitment to support this valuable partner. Due to this innovative progress, lead times no longer are a deciding factor and we operate now proactive to the requirements of the polish and international market.

It is great to work together since the beginning and to see how business is growing and developing. We are very pleased to work with such a professional and frank partner of the calibre Harlands.

INTERCOAT AMC Pancke AG - Division INTERCOAT - Boschstraße 12 - 24568 Kaltenkirchen - Germany
Tel.: +49 (0)4191 8005 0 - E-Mail info@intercoat.de - www.intercoat.de

L&L buyers guide:

Need help deciding which slitter/rewinder to invest in at Labelexpo? Take a look at our handy table of options to see what is on offer

	Scantech	KTI-Keene Technology Inc	Prati		Leomat/Rako Etiketten
Web widths	355.6, 457.2, 558.8mm	330.2, 406.4, 457.2, 508,558.8, 635mm	100, 130mm	280, 330, 420mm	310mm, 410mm
	14", 18", 22"	13", 16", 18", 20", 22", 24"	3.94", 5.12"	11", 13", 16.53"	12", 16"
Dual rewind	✓			✓	✓
Web advance	✓			✓	✓
Suction trim removal	✓	✓	✓	✓	✓
Motorized roll lift	✓	✓		✓	✓
Bulk waste rewind	✓	✓		✓	✓
Taper tension option	✓	✓	✓	✓	✓
Scissor knife slitting	✓	✓		✓	✓
Crush slitting	✓	✓			✓
Razor blade slitting	✓	✓			✓
Clear label counter	✓	✓	✓	✓	✓
Anti-static	✓	✓		✓	✓
Inkjet for variable data	✓		✓	✓	✓
Missing label detection s3stem	✓		✓	✓	✓
Missing label detection for clear labels	✓		✓	✓	✓
Web guide as standard	✓	✓	✓	✓	✓
Line guide for the web guide	✓	✓			✓
Flag detection	✓			✓	✓
Splice detection	✓			✓	
Stroboscope	✓			✓	✓
Printing station				(option for 330mm)	
Die cutting station option	✓			(option for 330mm)	for blank labels without register
Laminating	✓				✓
12mm diameter rewind capabilit3					✓
max speed	930 ft/min.	800fpm	150m/min	318m/min	250 m/min without die
What size unwind capacit3?	30"		400	720	max 700 mm
What size rewind capacit3?	18/24"	24"	400	600	max. 500 mm
100% inspection camera	✓			✓	✓
rewind for unsupported films	✓	✓		✓	
la3 on rollers for unsupported film?	✓	✓		✓	
Manual inspection feature					

slitter/rewinders

Leomat/Rako Etiketten		ABG International	Labelmate		Contract Converting	
310, 410, 510 mm	max 510 mm	270, 330, 410mm	152.4mm	254mm	610mm	1524mm
12.", 16", 20"	20"	10, 13, 16"	6"	10"	24"	60"
✓	✓	✓	✓	✓		
✓	✓	✓				
✓	✓	✓			✓	✓
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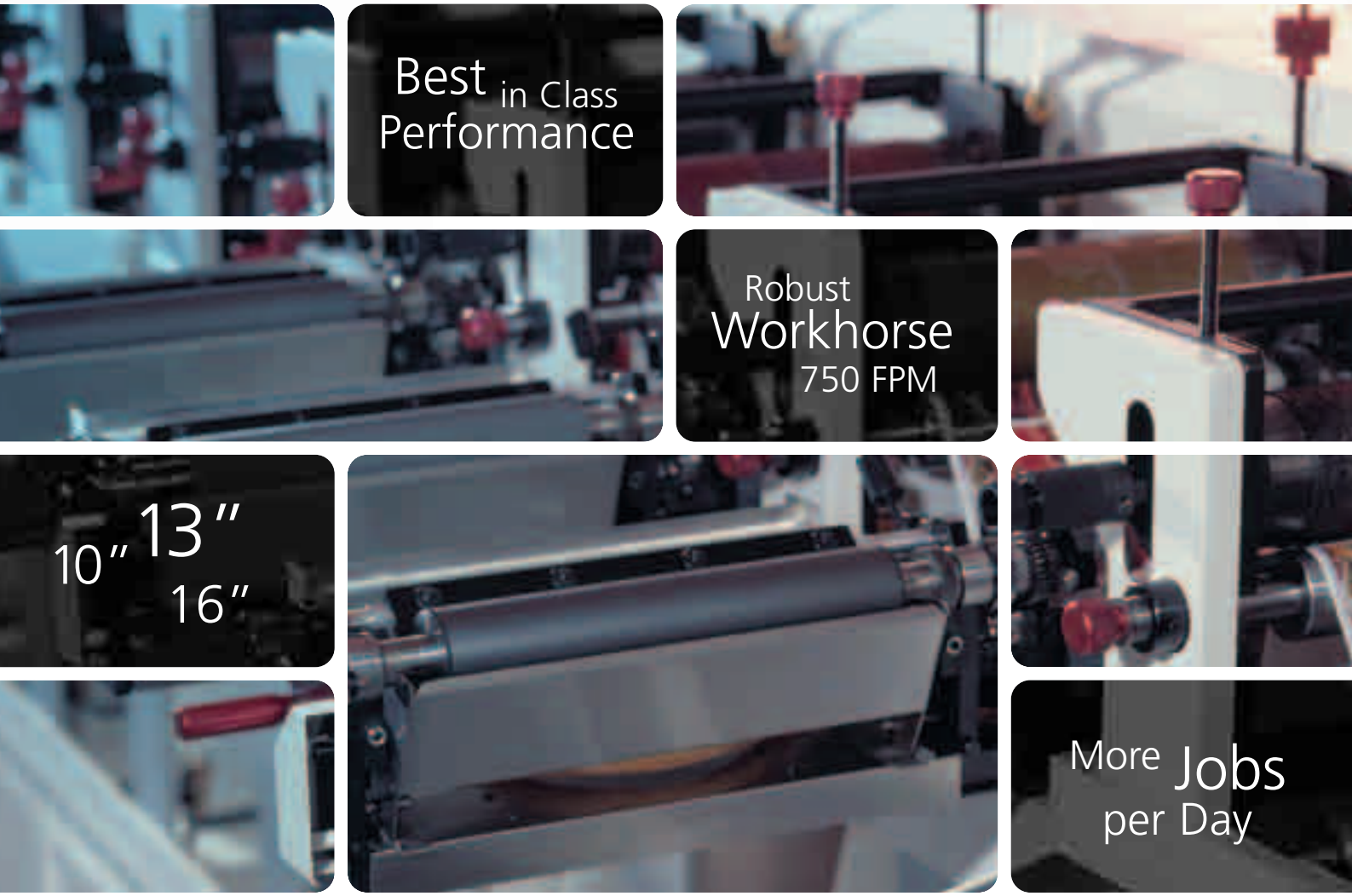
✓	✓	✓	✓	✓		
250m/min	in register up to 100m/min	300 m/min	30 IPS	30 IPS		
700-1000mm	max 700 mm	700-1250mm	16" dia.	16" dia.	50"	72"
540-600mm	max. 600 mm	450-1000mm	16" dia.	16" dia.	40"	60"
✓	✓	✓				
✓	✓	✓				✓
✓	✓	✓				✓
			✓			

T O T A L P E R F O R M A N C E



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CC (cont)	Wasberger	Rotoflex		Mark Andy
2134mm	280,380,440mm	261mm, 337mm, 413mm, 515mm, 610mm	337mm, 413mm	
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60"	750 mm as standard	250mm - 28"/711mm	28"/711mm - 30""/762mm)	32, 40 opt
55"	440 mm as standard	18"/457mm-24"/610mm	18"/457mm - 24"/610mm	20"
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Slitter/rewinder news

KTI-Keene KR Series Turret Rewinder

KTI claims that its new KR Series Turret Rewinder bridges the gap between the control of an off-line finishing system and the efficiency of an in-line turret rewinder. The company says that the KR can isolate the slitting and rewinding operation from the press. Upon entering the KR, the web passes through an air-loaded dancer system that corrects tension variations coming from the rewinder, which can lead to registration problems in the press. Once the KR has control of the web, the integrated web guide corrects edge alignment problems prior to entering the slitter.

Atlas provides slit/rewind to Ritrama

Bobst Group has confirmed the commissioning of two 2-meter wide Atlas slitter rewinders for Ritrama Group at their labelstock production facilities in Italy and in Spain. An Atlas OCS-2 slitter-rewinder was commissioned earlier this year at their factory in Barberá del Valles near Barcelona, following installation of the first machine during the autumn of 2005, at the brand new state-of-the-art Ritrama plant in Caponago, near Milan in northern Italy.

Desktop TT solutions from Label Accessories

Label Accessories Inc. designs rewinders and unwinders to be used in front of or behind any thermal/thermal transfer printer. Speed is automatically controlled to synchronize with the printer speed. The smaller GLR-50 is designed to rewind labels up to 4" wide and the GLR-100 handles labels wider than 4".

Karlville adds Webcontrol slitter rewinder line

Karlville Development is extending its partnership with Taiwanese manufacturer Webcontrol to introduce a line of slitters and rewinders. **Katy Wight** reports

The Karlville brand is universally recognized for its high-quality shrink label converting machinery line, which now includes a diverse range of slitting and rewinding equipment for both unsupported film and labelstock. Karlville Development LLC of Miami, Florida, began a partnership five years ago with Taiwanese manufacturer Webcontrol Corporation, enabling the American company to contract manufacture its shrink label converting machinery for distribution worldwide under the Karlville brand. The two companies have teamed up again recently to promote Webcontrol's brand of slitting, doctor and inspection machines.

'Webcontrol has been selling this product line successfully in Asia for over 15 years,' says Karlville vice president Raul Matos, 'and we are very pleased to be able to give our customers more choice in the equipment that we provide. It's the perfect complement to our existing product line, enabling converters to buy jumbo rolls of film or labelstock and slit them down themselves with our trusted machinery. Webcontrol is an excellent partner, allowing us to provide a very high quality product at a competitive price.'

Webcontrol's 'Slit' product line comes standard with differential rewinds and an automatic tension control system and is designed to slit everything from PE to 400 micron aluminium. The second model line is designed for evenly distributed high performance films. The user can change the tension settings between manual, automatic and taper modes to optimize the slitting application, and an inspection table option is available. The slitting machines are available in web widths of 1000mm, 1300mm and 1600mm and can reach speeds up to 450m/min.

Webcontrol offers two cutting systems. All of its slitters come standard with razor and groove roller cutting systems (the razors can be fixed or mounted optionally on air-activated systems) and for paper and labelstock applications the company offers a shear knife device. A vacuum drum keeps the web from moving after it has been aligned and users can choose from an optional unloading system and trim rewinder. All models come standard with AC Vector drives and forward/reverse options.

Webcontrol's inspection product line includes the doctor model, which is designed for narrow applications for flexible packaging and label converting; the inspect auto model, which utilizes a closed-loop tension system; and the inspect dancer utilizes a dancer system for the rewind tension system. Operators can choose from optional camera inspection.

Webcontrol has established itself as one of the leading brands in the slitting and rewinding market in Southeast Asia, through its advanced web tension control technology, machine design development and operator interfaces. Karlville aims to establish the same reputation for the machinery in the rest of the world. It will handle sales and service to North & South America, Europe, Africa and Middle East from its operation in Miami. Karlville has an established distributor network with local sales and service throughout the world. 'Both Webcontrol and Karlville are prepared to commit all of the resources necessary to bring the Webcontrol technology to the highest level over the next few years,' says Matos. ■

Webcontrol's 'Slit' product line comes standard with differential rewinds

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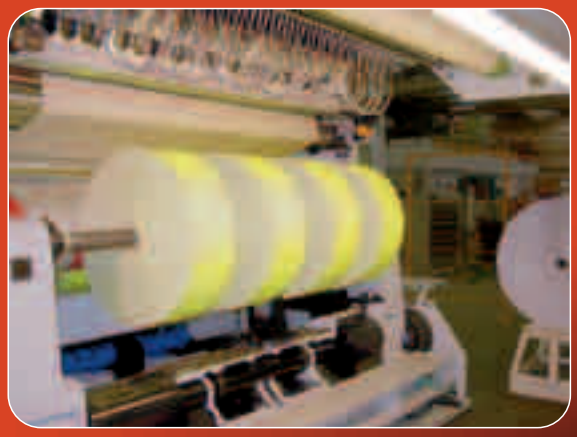

The Atlas OCW-2 slitter rewinder

World Leader in Slitter Rewinders for Labelstock

The Atlas OCW-2 slitter rewinder is the most technically advanced machine in its class for slitting & rewinding filmic/synthetic, as well as conventional labelstock.

This 'centre surface' slitter minimises adhesive 'bleed' and provides better balance of rewind tension in finished reels, producing the highest quality rewind packages.

The latest Atlas technology also includes a new, unique rewinding technique for filmic/synthetic material as low as 60 micron, at speeds in excess of 600m/min (1970ft/min). Quality & productivity in harmony!

Atlas automation systems also dramatically reduce machine down-time for job changeovers.

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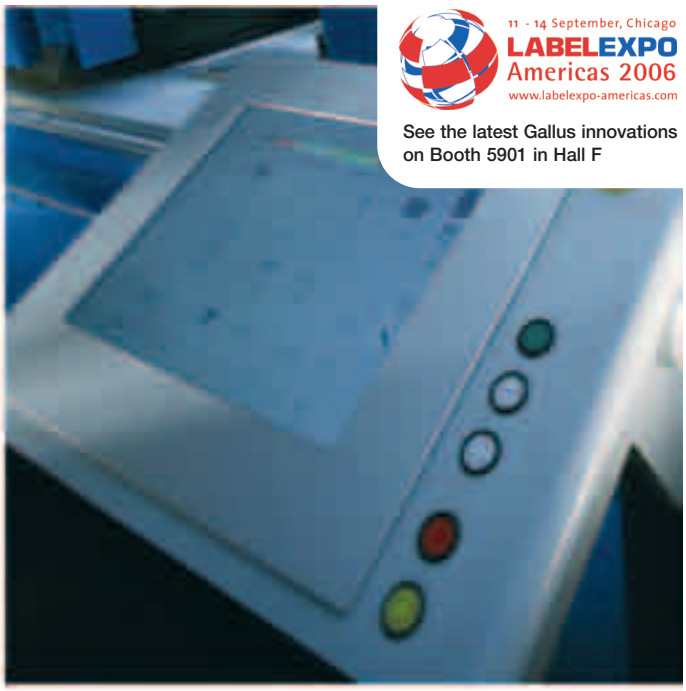

A few reasons why the new S-class is better

At Gallus ‹S› means servo, since the Gallus EM 260/410/510 S has direct servo-driven hybrid printing units for flexographic and screen printing: printing cylinders and anilox rollers are simply attached as sleeves. It is also possible to change the process without cutting the web. All this ensures minimum set-up time, less waste, increased safety and precision: in other words, optimum efficiency with more substrate diversity, e.g. monofoils. The entire control, including pre-setting, recalling stored job functions and other important parameters, is made directly from the touch-screen, which further simplifies the work process and improves quality. All these reasons are why the new S-class is better.

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Film review

This is an exciting time for polyolefin labelstock development, driven by the demands for performance labeling combined with new functional properties. Beginning with a report into Avery Dennison's new wraparound shrink film, **Andy Thomas** surveys the sector

Shrink sleeve labels are the fastest growing labels sector, albeit from a relatively small base compared to the volume of PS and wet glue. Volumes grew from 1,263 million square meters in 2002 to 2,133 million square meters today, with the sector projected to grow at double digit rates through to 2010.

Avery Dennison's Engineered Films division is now claiming a technological breakthrough with the development of a roll-fed shrink polyolefin alternative to current sleeve-based technologies with up to 40 per cent shrink potential.

Today PVC is the dominant shrink sleeve substrate in all global markets apart from Japan, where OPS is dominant. Environmental pressure in Europe against PVC has led to a growth in usage of PETg, which exhibits the highest shrink values of any of these substrates.

In a sleeve workflow, the label roll is printed, formed into a tube and seamed by the converter. The formed roll is sent to the end user, whose machinery places the sleeve over a container and shrinks it in a heat or steam tunnel. With Avery's alternative, by contrast, the label converter prints and slits the reel as he would for standard wraparound labels.

At the end user, the labels are applied to the container on standard wraparound applicators. But in an additional step the seam is sealed using a UV adhesive which is cured in a separate station before the containers enter the shrink tunnel.

Sunder Rajan, director, new business development at Avery Dennison Engineered Film division, says that the seams are 'almost invisible' due to the excellent wet out from the ultra-low viscosity UV adhesive, which means there is almost no compression required in the contoured areas during seam wiping. The low temperature during UV adhesive application ensures there is no film pre-shrinkage.

Superior seam integrity comes from the free radical adhesive chemistry, which delivers a high degree of cross-linking,

> "Avery's Engineered Films division is now claiming a breakthrough with the development of a roll-fed shrink polyolefin alternative to current sleeve technology"

according to Rajan.

Avery has proven its roll-fed sleeves on in-line labelers, and tests on rotary label application equipment is ongoing. Sunder Rajan emphasizes that the wrap-around labelers do not require any modification, and the only additional piece of equipment for the end user is the UV tunnel, which takes up around one to two feet of line space. A bottle positioning device is recommended to minimize capital costs.

Avery's roll-fed shrink labels labels are a co-blend of PE and PP, with a thickness of 2.0 mil. They require a higher temperature to shrink than standard sleeving materials, which gives them a high degree of thermal stability.

An important environmental advantage claimed by Avery Dennison arises from the low specific gravity (less than one) of its shrink material, which means the labels will separate from PET bottles in a flotation tank during recycling. PVC shrink sleeves by contrast (with a specific gravity greater than 1), will sink with the PET. The hot caustic bath causes the PVC to shrink further, increasing its bulk density.

In Avery Dennison's tests with unprinted polyolefin sleeves the label fragments remaining after flotation were removed

beyond the level of detection by a post-wash elutriation (use of air blowers to separate lighter materials). The UV adhesive also floats and is removed with the labels, becoming hazy during the caustic wash for easy identification. There is no residual adhesive found adhered to the PET, says Avery.

Because of the higher temperature at which shrinkage occurs in polyolefins, the label is thermally stable under washing conditions of 185^{0}F. The polyolefin labels also pass the ink bleed protocol.

According to Sunder Rajan, the total applied label (TAC) cost of Avery's roll fed solution is between 16-20 per cent less than competitive sleeving systems, assuming an equal material cost. Most savings arise during printing/converting: 'There is no need for oversize labels – so you get more labels per roll – and there is no seaming step or refrigeration required,' says Rajan. 'There is also a higher probability of efficient web usage.'

During label application, savings arise from better machine utilization – being able to use the same applicator for conventional wrap-around and for shrink labeling – while larger rolls mean extended run times and lower basis weight equates to less label weight per roll.

For the converter, roll-fed shrink films reduce lead times, since there is no secondary converting process on-site.

Clearly, polyolefins are not suitable for high shrink applications (above 40 per cent) where PVC, and particularly PETg excel, although Avery's engineers are convinced they will be able to attain higher shrink vales as the technology develops.

OPP seeks new markets.

Today we see a big push to increase the range of applications for OPPs in the filmic labels market. The search for innovation has been strongly driven by companies like AET, ExxonMobil and Innovia, and the recent resurgence of Treofan shows the sector is buzzing with renewed energy.

OPP certainly has more opportunities to compete in new sectors as brand managers show an increased willingness to move outside labeling solutions 'traditional' for their sector.

One only has to think of how the bottled water sector has moved from wet glue and cut & stack paper to a range of film decorating technologies including pressure sensitive, cut&stack, reel-fed wraparound, shrink and stretch sleeve labels.

If we take the labels market as a whole, OPP continues to show good growth in the niches of reel-fed wraparound and IML. In the wraparound segment over 90 per cent of the volume is accounted for by OPP. Growth has been largely driven by carbonated beverages and mineral water, although this whole market is maturing.

The trend today is to differentiate through the use of shape and shrink labels. New technology allows converters to shape a reel-fed wraparound label by laser die-cutting one or two edges of the film. In the IML sector OPP accounts for around 80 per cent of the market volume.

But where else might OPP expand its presence? If we look at the PSA reels market, today OPP accounts for less than 10 per cent by volume. But things are changing fast. Growth of OPP in this segment is driven by a number of factors, including the continued replacement of paper in performance applications, the growth of clear-on-clear labeling – especially for beer – good growth in white PSA, and migration from sheetfed to UV flexo printing.

"The trend today is to differentiate through the use of shape and shrink labels. New technology allows converters to shape a reel-fed wraparound label by laser"

In the longer term, OPP's replacement of paper could speed up dramatically if machinery capable of dispensing thinner PSA substrates becomes available. Tarquin Crouch, ExxonMobil's labels market segment manager, estimates ExxonMobil could cut the thickness of filmic face stocks by half and make thinner filmic liners whilst still growing total OPP volumes at the expense of paper.

An interesting opportunity for enhancing a brand's image is the direct replacement of wet glue paper labels by OPP films. ExxonMobil in the US, for example, has produced a rotary printable metalized beer label with a special absorbent layer which can be applied on standard wet glue machines, and a new offset printable version is being trialed in Europe

Even more interest is seen for a robust, clear, wet-glue film label that could be applied on the same applicator as paper labels, allowing brand managers to obtain a clear film effect without needing to invest in pressure-sensitive applicators.

This application represents a real challange for OPP development as it requires a material of excellent antistatic properties and a degree of water permeability or absorption.

'There are many more variables to control with wet glue films, including the surface characteristics of the bottle and the

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thickness of glue,' explains Tarquin Crouch. 'And because wet glue film labels are thicker and more sophisticated than our rotary films, in order to achieve dispensability, this does impact their cost.'

The first applications of this labeling technique are starting to appear. ExxonMobil's 50LTG702 film is now being used with high solids glues. Crouch sees a big opportunity for wet glue OPP labels in developing markets like Eastern Europe where marketeers want to achieve the sophisticated look of clear-on-clear PSA, but where acceptable standards are lower and wet glue applicators are the norm.

'In this case wet glue film is a good intermediate step to reel fed wraparound or PSA clear-on-clear labels,' says Crouch. 'However we are working to develop a robust solution that is fully fit for use.'

Wet glue OPP technology presents an opportunity for sheetfed label printers to compete in the clear label market, providing that their presses are equipped with anti-static attachments and die blade angles are changed to cut film. It would also be possible to produce wet glue film labels on an in-line press with a sheeter, providing they can be stacked in a format which can be loaded into a wet glue magazine.

'There is a requirement for rotary end-of-line finishing solutions for cut&stack and wet glue film applications which are not yet met by equipment capabilities,' says Tarquin Crouch.

Conformable PSA film is another area with huge potential for OPP growth. In applications like personal care, where the label has to move in conformity with a flexible container, PE-based label films are dominant. However, PE films are harder to print and do not exhibit the clarity of OPP.

Last year, L&L reported that Innovia launched a conformable OPP film. ExxonMobil developed its own product range at the same time, and recent announcements by companies like Green Bay Packaging show that this is a key future trend.

Film news

MACtac improves BOPP offering

MACtac says it has improved its BOPP films for roll label printing. MACpropy and MEDAclear films have been optimized for UV flexo printing, with converters benefiting from better solid coloring and less mottling. These films are available with both MP 128 N emulsion-based adhesive and MP 710 N hot melt adhesive.

MP 710 N hot melt constructions are now offered with a 30 μm PET liner. This liner offers substantial benefits to printers : a higher converting speed, less web breaks thanks to a higher mechanical resistance and an excellent printability (no paper dust).

End-users benefit from a higher productivity with 20-25 per cent more labels on each roll than with a 55 μm glassine paper, and faster dispensing speeds.

Thin PO Film for PSA Labels (check!)

Nordenia's latest development is a 60 μm polyolefin label film claimed to combine excellent optical properties with good dispensability, die-cuttability, squeezability, conformability, dimensional stability and water resistance. Reducing the gauge provides benefits like significant cost reduction, less raw material use, and more linear meters with the same roll diameter.

Avery introduces 3 mil MDO

Fasson 3 Mil MDO, designed specifically for the prime label market, incorporates polymer blending, co-extrusion, machine-direction orientation (MDO) and cross-direction conformability into its design to provide semi-rigid to full squeeze performance.

Intercoat films obtain HP qualification

Interecoat has successfully qualified PE and PP films at the Research Center Maastricht of HP Indigo for use on HP Indigo's ws2000 and ws4000/4050 presses. The white and transparent PP labels (1170 and 1172 K6d P6) are a 60 micron PP film with an acrylic adhesive and a highly calandered glassine liner (62 g/m2). The white and transparent PE labels (1160 and 1162 K6d P6) are an 80 micron PE film with the same acrylic adhesive and glassine liner.

Tests with the Intercoat materials reveal that the print of 1-2 label motifs is sufficient as set up to achieve good prints with 6 toner colors on a HP ws4050. The qualification process checks the anchorage onto the film, printability under a broad range of machine parameters and reliability of the self adhesive films. Tesa tests showed an excellent ink anchorage for all these materials.

Intercoat aims to offer a broad range of Indigo self adhesive media, including PE, PP; PET and PVC.

Wash off film labels

Intercoat has launched a 75 μm washable film bottle label. Designated 6952 C30 P6h, the film is available with a 30 micron PET liner and a the transparent P6h adhesive with high shear strength to reduce adhesive bleeding for no-label look applications. The label is also available as 6952 K6d P6 with the 62 g/m2 glassine liner K6d.

Intercoat says the transparent label peels off easily during

Ko-Pack STEALTH 650 16-color both sides flexo printing press

Pepsico embraces Ko-Pack sleeves

Website http://www.ko-pack.com/

Ko-Pack International is claiming a breakthrough after developing six 'environmentally-friendly' shrink-sleeves and labels, printed both sides in full colour for PET bottle applications.

According to a survey conducted in May 2005, the annual Japanese sales of PET bottled water has reached 16,685M bottles, a figure set to increase in the years to come.

In order to cope with this growth in demand for PET bottles, Government standards require that consumers must be made aware of the need for recycling - a need which requires the film label to be separated from the bottle. Up to now, this has not been easily achieved. The difficulty lies in who should be responsible for making this separation possible: the consumer, the bottler or the label converter. This has remained a major barrier to achieving domestic recycling targets.

This problem has been specifically addressed by Ko-Pack's Yamagata label converting operation, which has combined flexo press developments with their expertise in printing inks and filmic substrates to produce a range of innovative promotional both-sides printed products, specifically for users of PET bottles.

"It is not currently possible for gravure presses to encompass in-line converting functions such as slitting, Sleeve forming and perforating"

The solutions are now being used by leading international soft-drinks manufacturers.

Gravure printing has traditionally been the dominant method commercially available for printing shrink-sleeves, a print process not suited to both sides printing of shrink-sleeve films. Additionally, it is not currently possible for gravure presses to encompass in-line converting functions such as slitting, sleeve forming and perforating - all achievable with Ko-Pack's CI D flexo presses.

Each of the six products include an incentive for the consumer to remove the sleeve label from the bottle. Details of special promotions collectable stickers and games are printed on the reverse side to encourage the consumer to separate label from bottle. Additionally from the point of view of the drinks manufacturer/bottler, twice the amount of space is available for product and market promotions, encompassing special offers, games utilising 'scratch-off ' patches and unique variable data.

One of the first imitational companies to use the Ko-Sleeve products is Pepsico, following assessment by the company's New York headquarters. Since February 2005, Ko-Pack has delivered both-sides printed 'window' labels to Pepsico locations in Poland Spain, Mexico, Turkey, America, Russia and Italy. These labels carry special campaign designs based on the sales promotional objectives of each country.

Explaining the thinking behind the concept, Jun Kobayashi, chairman of Ko-Pack International, said: 'It all began several years ago, when I questioned the reason for only printing on one side of PET bottle labels. I realized that by changing to both-sides printing there would be very significant benefits. Drinks manufacturers would immediately double the space available for product information and national/International promotions,

without incurring additional film costs and consumers would be presented with an incentive to remove the labels and so directly contribute to achieving recycling targets.'

The various types of product in the Ko-Sleeve range can all be printed in up to 6-colours on either side, plus additional features:

- The wrap-around 'window' label is multi-layered with the reverse side incorporating removable stickers
- 'scratch-off' games can be produced on the reverse of wrap-around labels and shrink-sleeves
- lottery games featuring unique variable data can also be shown on the reverse of labels and sleeves
- novelty lens label which utilizes the magnifying concept of viewing an image through water
- chameleon label again utilises the effect of colours of the bottle contents on the label or sleeve design

Jun Kobayashi continued, ' Pepsico have chosen the 'window' label for national product promotions featuring collectable stickers of famous sports people, as well as seasonal Christmas stickers. ' Pepsico has approximately 250 bottlers in over 100 countries. Almost 150 of these are directly accountable to Pepsico and it is expected that nearly all will adopt the 'window' label in future marketing campaigns.

'It is very rare that labels are exported to overseas markets from Japan,' continued Jun Kobayashi. 'I take great personal pride in Ko-pack's capability of being able to supply them to Pepsico bottlers worldwide. The soft-drinks market is very competitive and manufacturers will always continue to look for new and inventive ways to encourage and maintain customers. Double-side flexo printing provides an opportunity to do this and as such will rapidly move into those areas previously served by single-side gravure printing.'

With gravure currently under pressure in Japan from legislation on solvent emissions, flexo is also seen as a more environmentally friendly process.

Ko-Pack has received in 2005 two prizes 'WORLDSTAR' and 'Good Packaging' for the PET bottle Label. 'WORLDSTAR' is the award for packaging excellence, which was awarded by the World Packaging Organization. 'Good Packaging' is an award for a beverage packaging category awarded by the Japan Packaging Institute. ■

"It is very rare that labels are exported to overseas markets from Japan. I take great personal pride in Ko-Pack's capability of being able to supply them to Pepsico bottlers worldwide"

International Patent Pending PCT/GB 2004/001892

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the washing process for recycled bottles in a hot alkaline solution at pH2 and 70°C, with the adhesive layer dissolving from the bottle. The label sticks on the bottle if exposed to neutral water or humidity under room temperatures.

'This mechanical feature is unique because standard label material will stick on the bottles and block the access of the washing solution to the adhesive and thus remain on the bottle,' says the company. The washed off labels can be easily separated using a coarse filter. The adhesive washes off quickly and dissolves in the water, leaving no traces on the bottles

The new film is printable with a broad range of technologies, and offers end users the possibility to use 'no label look' applications and cold stamping.

Green Bay pushes green film

Green Bay Packaging has officially released its EcoVantage pressure-sensitive label film made from polylactide (PLA) polymer derived from corn rather than petrochemicals.

The proprietary polymer is sourced from NatureWorks, a Cargill company. It is claimed fully compostable and can be used as a 'valuable soil amendment', says Green Bay.

EcoVantage film has a glossy appearance and the surface is specially treated for enhanced ink adhesion. Green Bay says material handling characteristics are similar to polyester in terms of stiffness and strength for high-speed converting and dispensing. Labels made from EcoVantage film can be applied using standard label application equipment. EcoVantage is available in 1.6 mil clear and 2.0 mil white versions.

Also new from Green Bay are its FlexiClear and FlexiWhite pressure-sensitive BOPP label films, claimed by the company to exhibit high levels of stiffness, conformability and print/die cut stability.

FlexiClear and FlexiWhite films are top coated for superior ink adhesion. They can be converted using offset, screen, letterpress, and flexography.

In line with demands for added functionality, both FlexiClear and FlexiWhite films are engineered to provide a high degree of squeeze conformability. In wall-to-wall flex tests, the bottles failed before the labels showed signs of darting, lifting or fracturing.

Eliminating top coat on barcode films

Responding to customer requests for an opaque, high-performance plastic film that would eliminate the need for surface treatments to achieve satisfactory print contrast in bar code labels, GE Plastics has developed a new white grade of its Ultem polyetherimide (PEI) film. White Ultem WH217 film is pigmented for high opacity to ensure bar code labels can be read correctly – the film provides a print contrast ratio of 98 percent out of 100. Ultem WH217 film incorporates flame retardance and offers higher temperature resistance and better dimensional stability than polyvinyl fluoride films, according to GE.

GE's Ultem WH217 film meets UL 94 VTMO flame requirements without the use of halogenated additives, enabling the material to comply with European RoHS standards, making it an excellent candidate for electronic applications. It is claimed to offer excellent tear strength to prevent label damage during processing, and high temperature resistance for demanding applications such as printed circuit boards.

For label manufacturers, GE's Ultem WH217 film provides consistent thickness (+/- 10 per cent gauge control at 50 μm) that helps ensure even application of label adhesive or clear coatings that may be needed for print receptivity with certain inks.

Treofan expands BOPP production

Treofan Group, one of the world's leading specialty BOPP film manufacturers, has announced that it is close to doubling capacity at its North American plant in Zacapu, Mexico. Treofan will invest approximately US$45 million in expanding production and R&D facilities, including a new state-of-the-art 8.2 meter high-speed production line to be supplied by Brueckner.

'We are very pleased that we are now refocused on growth,' said Peter Briggs, CEO of Treofan. 'The additional capacity in our Zacapu plant in the Mexican state of Michoacan will support growth with key customers in strategic markets in the USA, Mexico and Canada.'

The new production line is designed to produce specialty multilayer coextruded BOPP films. This investment supports Treofan's growth strategy in specialty films for flexible packaging and label applications in the NAFTA region.

Peter Briggs added: 'With this new investment, we are entering a period of expansion following the successful restructuring of our global business. We have a clear strategy to grow our business beyond our market-leading position in Europe. This investment will give us a stronger competitive position in North America and allow us to expand the company's specialty product portfolio and better serve our North American and multinational customers.'

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Label Summit Asia

The latest edition of the Tarsus Group's global label summits takes place in Bangkok in October, allowing label converters from SE Asia and the broader Asia-Pacific to learn about the latest developments in labels technologies and markets. **Andy Thomas** reports

10-11 October, Bangkok

LABELSUMMIT Asia 2006

www.labelsummit.com

Label Summit Asia 2006, taking place 10-11 October at the Intercontinental Hotel in Bangkok, is attracting leading label experts to speak at the high-level conference as well as printing organizations from across Thailand, South East Asia, Australasia and the rest of the world, who will be exhibiting at the event.

The conference-led event is expected to attract over 400 senior delegates and key decision-makers who will attend over 17 seminar sessions to learn about the latest developments in flexo technologies, digital printing, RFID/smart labels, anti-counterfeiting technology and other leading edge topics.

South East Asia is becoming an important hub for label growth both regionally and globally. Overall, Asian markets will account for 37 per cent of global label consumption by 2010 and foreign investment from leading international suppliers is already pouring into South East Asia. This is propelling self-adhesive label growth at rates up to 20 per cent a year. Other significant trends include the strong expansion of shrink sleeve labels over the next three years.

Thailand is emerging as a key target for Western label printers looking to do business in Asia, with both CCL and the Skanem Group setting up local label converting plants to handle the requirements of global multi-nationals in the region. Skanem recently started building a 4,200 square meter factory on a 13,000 square meter site at Amata Nakorn, 55km south of Bangkok and 30 minutes from the Suvarnabhumi airport which opens this fall. The factory should be in production by New Year.

The conference program will focus on regional and global hot topics and provide delegates with the opportunity to increase their knowledge about technologies shaping the future of the industry. Other conference themes include: South East Asia label industry growth; regional and international labeling standards; global branding issues; brand protection; pre-press and production technology; and RFID/smart label technology in practice. Leading global label experts will be delivering presentations to delegates over the two days.

The summit also has a table-top exhibition running alongside the main conference with international and regional suppliers showcasing their latest product developments. Exhibitors include: Avery Dennison, Nilpeter, Mark Andy, Gallus, UPM Raflatac, Gidue, Omet, Link Label, Thai KK, GRE Digital Solutions; DoWell Swiss, Stork, Rotoflex, Alphasonics, GEW and other key players.

Roger Pellow, Labelexpo managing director of the Tarsus Labels group, commented: 'The label industry in South East Asia is now in a really dynamic phase. With leading global suppliers investing millions of dollars in setting up new manufacturing plants in the region combined with global retailers and brands expanding their presence in the area, there is great potential ready to be unleashed. Our summit provides a focal point for key regional stakeholders to come together to learn about the latest trends and technological developments that will have a significant impact on the future of label businesses. We look forward to welcoming the industry to Bangkok this October.'

Conference details overleaf

Day 1
10 October 2006

09:00 - 9:20

The potential of South East Asia labels market- challenges, opportunities and obstacles

Mike Fairley, Director Strategic Development, Tarsus Group

9.20-9.50

Keynote Presentation: South East Asia- markets, economy, industry and trends

Kriengkrai Thiennukul, President, Thai Printing Association

9.50-10.20

Keynote Presentation: Asia Pacific trends & market influences

11.05-11.35

The rise of the label industry in South East Asia- growth and performance - industry survey results

Mike Fairley, Director of Strategic Development, Tarsus Group

11.35-12.35 PANEL SESSION

How to meet end user requirements - the converters' perspective

Preecha Klinkaeo, Managing Director, Prayurawong Printing, Vice President, The Thai Printing Association
Arthur Lai, Group General Manager, Asia Division, Pemera Labels

14.00-14.30

Product and decoration technology trends and qualification process

Jouni Komulainen, Sales and Marketing Director Asia, UPM Raflatac

14.30-15.00

Supply chain collaboration in a label environment- the design and prepress perspective

Jean Pierre de Moor, Vice President Asia Pacific, Esko

15.00-15.30

What are the latest advances in plates and plate mounting?

Jimmy Nystrom, Sales and Marketing Manager Graphics, Stork Prints
Wolfgang Wittmann, Regional Sales Manager, Lohmann

16.15-16.45

The influence of anilox in high resolution printing

Prasert Vachiraprakarnsakul, Technical Director, Harper Asia Pacific Co Ltd
David Jones, Managing Director, Alphasonics

16.45- 17.15

Creative special effects and solutions with inks

XSYS

Day 2
11 October 2006

9.00-9.10

Chairman's welcome and introduction

Mike Fairley, Director Strategic Development, Tarsus Group

9.10-9.40 CASE STUDY

How to build your brand through effective labeling and packaging?

Umesh Phadke, Country Marketing Manager, Procter & Gamble

9.40-10.10 CASE STUDY

Analysis of the specific label requirements of the health and beauty sector

Hartmut Tiekenheinrich, Director of the Packaging Development Department, Beiersdorf

10.10-10.40 CASE STUDY

What do pharmaceutical brand owners really want from the label printers?

Rahul Bhargava, Associate Director, Ranbaxy Laboratories

11.25-11.55

Capitalizing on narrow-web opportunities – beyond pressure sensitive

Kim Regin Sustman, Director, Nilpeter Asia Pacific

11.55-12.55PANEL SESSION

Which presses and printing solutions will deliver maximum performance and value? - UV flexo, offset, letterpress, combination printing

Jules Farkas, Managing Director, GRE Engineering
Ken Daming, Director of Product Management, Mark Andy
Federico d'Annunzio, Managing Director, Gidue
Paolo Grasso, Area Manager Asia, Omet

14.10-14.40

Digital printing- a chance for new fields of business

Les Bovenlander, Industrial Category Manger, HP Indigo Asia Pacific & Japan

14.40-15.40PANEL SESSION

Brand protection – brands under attack

16.10-16.40

Emerging technologies- In-line RFID solutions

Ken Daming, Director of Product Management, Mark Andy

16.40- 17.10

Think smart, think small- making labels even smarter

Mike Fairley, Director of Strategic Development, Tarsus Group

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Finat in Poland

Poland is Europe's fastest growing labels market, which made it an excellent venue for FINAT's annual congress. **Andy Thomas** reports on a conference program which showcased the experiences of leading global label converters

This year's FINAT congress was held in Warsaw, the capital city of Poland, which is today among the fastest growing self-adhesive labels market in Europe. The consumer goods market in Poland has become extremely demanding, as Poles, like other East Europeans consumers, have adopted Western lifestyles in the decades following the collapse of communism. Label quality is therefore increasing, with increased demand for modern, effective labels, including PS, IML and shrink.

The Congress keynote was delivered by Marek Zuber, financial adviser to the Polish prime minister, who pointed out how dependent Polish growth is on the performance of other European countries, particularly Germany.

The Polish Government is taking further steps to reinforce its economy with reforms to payroll and social security systems aimed at lowering costs, changing and simplifying the tax burden and intending to join the Single Currency in the not too distant future.

'By 2009 we should be able to meet the Maastricht conditions and while the Polish Government has not yet fixed a target date, I believe we will join the Single Currency sometime between 2010 and 2012,' Zuber said.

Mr Bill Fawkner-Corbett, a director of M and A International, who has helped companies develop in Poland for the last ten years, said local labor costs were typically between one-quarter and one-sixth of those in Western Europe and while unemployment was falling – it was now down to about 16 per cent – there was a good pool of highly skilled workers available.

Since 1990 $84 billion of foreign investment has poured into Poland and recent surveys show that 54 per cent of those investors planned further investment in the next 12 months.

'In 1990 many industries, such as self-adhesive labels, did not exist. Now your customers are here, manufacturing for the Polish market, and the Eastern and Western European markets, and there are major opportunities for your industry to take,' he said.

Since Poland's accession to the European Union last year, 'the Western perspective of Central and Eastern Europe has changed to become "part of us", while the local perspective is now one of having "joined the club". It has made a major difference to their confidence,' Mr Fawkner-Corbett said.

A feature of this FINAT congress were the excellent presentations from FINAT member label converters from Poland and across the globe.

L&L readers will be familiar with Warsaw-based WDH, which this author visited for a previous edition of the magazine. Company president Miroslaw Szczesny told delegates about the importance of service and innovation in today's global climate. Converters surprise the client with something non-standard and 'create a product that is unattainable from the competition but necessary for the market.'

Natalia Zalaszewska, quality director at Polish label converter Natalii, explained how the company had successfully diversified into roll-fed PP in-mold label (IML) on its Nilpeter flexo presses, developing the technology to convert the labels off-line. Today the company has two IML processing lines with a third line under construction.

Jackie Evans, marketing director at BP Labels in Wales,

"In 1990 many industries, such as self-adhesive labels, did not exist. Now your customers are here"

"European consumption of self-adhesive labels increased 3.2 per cent last year to total 4,905 million square meters, representing 72 per cent growth over the last ten years"

looked at the use of creative marketing strategies. Too many printers still don't understand why they need marketing, but Evans showed how marketing tools – PR, the Internet, advertising, direct mail – allow printers in tight markets to reach new customers. She gave practical examples of two successful marketing campaigns for BP Labels which raised customer perceptions of the company and developed new business. Each campaign had a measurable ROI.

Erol Zafer Akbas, from Turkish converter Doga Etiket, spoke about the company's experience in expanding into neighboring countries on the borderline between West and East, in particular how to adapt to different business cultures.

The company learned from its first venture into Romania the importance of local representation, a lesson it applied from the outset when moving into Bulgaria. 'We found very creative designers, and label users were prepared to pay for what they got, and in both countries use more colorful, innovative labels that require higher level and multi-printing techniques.

By contrast, the Middle East required new skills and a great deal of patience – 'even a simple agreement took several days to negotiate.'

The company's Ukrainian, Georgian and Russian customers have extensive knowledge of labels and require the highest quality, but, 'these people do not trust you easily and to gain their trust requires time.' You have to get used to the hard liquor that is consumed when business is being done and body language is hard to interpret during negotiations.

Jeniaty Satjawiguna of Master Label Indonesia looked at how to prepare a business plan based on innovation, service and quality. 'You need to look at where you want your business to be, who your customers are and who they could and should be.' Suppliers should be used as part of your innovation process. 'You need to excel at finding and creating customer need, react quickly to failure and have an obsession with quality.'

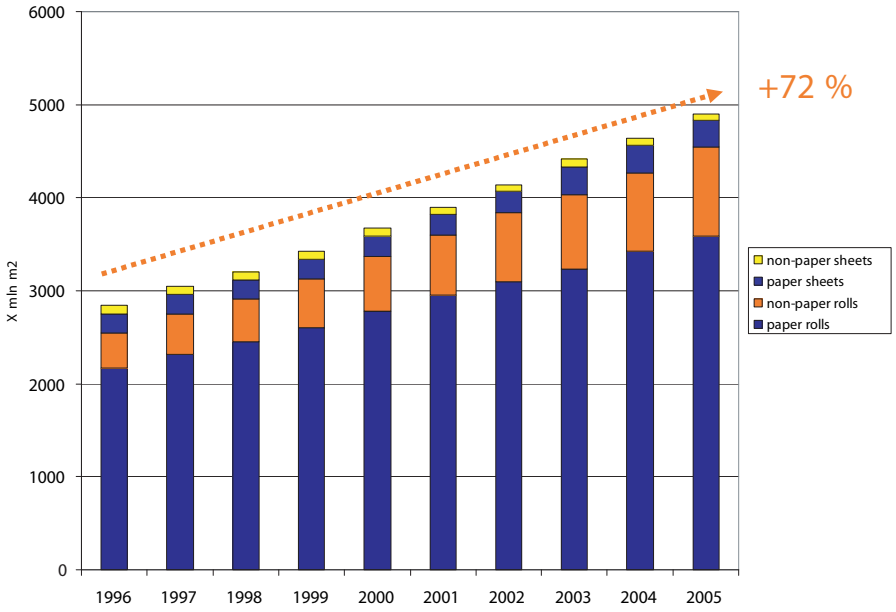
And in the harsh reality of global competition, label printers can no longer raise prices to match costs. 'Rather we have to try to lower costs to accommodate rising customer expectations.'

Other presentations by converters included Carlos Peria from Spanish label converter Argraf Autoadhesivos talking about his experiences developing wine labels, and Romuald Szperlinski, president and managing director of Skanem Introl describing his experiences in the Polish labels industry over the last two decade

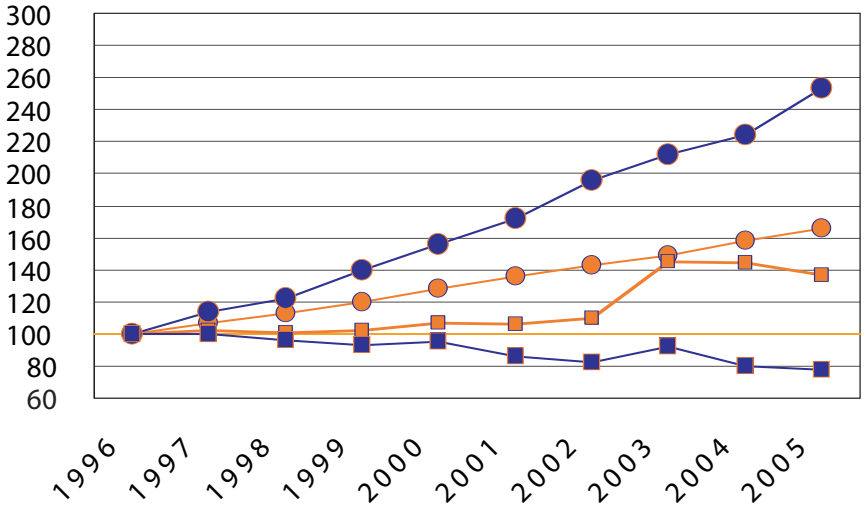
European market growth

European consumption of self-adhesive labels increased 3.2 per cent last year to total 4,905m square meters –

Labelstock Demand Europe, 1996 - 2005



Relative growth 1996 - 2005



representing 72 per cent growth over the last ten years, according to independent research commissioned by FINAT. The organization is forecasting an overall 5.8 per cent growth this year with Eastern Europe continuing to show the greatest year on year improvement in demand.

Jules Lejeune, FINAT's managing director, revealed that growth in the paper roll sector, which is nearly 75 per cent of the business, was up in 2005 by five per cent although filmic material roll output was up by 13 per cent – and is now 2.5 times greater than it was in 1996. Output on paper sheets slumped by 4.5 per cent and on filmic sheets was down by 2.4 per cent.

The organization's statistics show some startling differences in the amount of self-adhesive labels passing through the public's hands in different parts of the continent. In the UK and Ireland this per capita consumption is now more than 14 square meters of labels per person per year, whereas in Eastern Europe individuals will only handle about two square meters of labels on the products they buy.

However this region is only just starting to appreciate the benefits of self-adhesive and last year showed the greatest label sales increase – of 12.6 per cent – while in the UK and Ireland, label sales fell by 1.4 per cent.

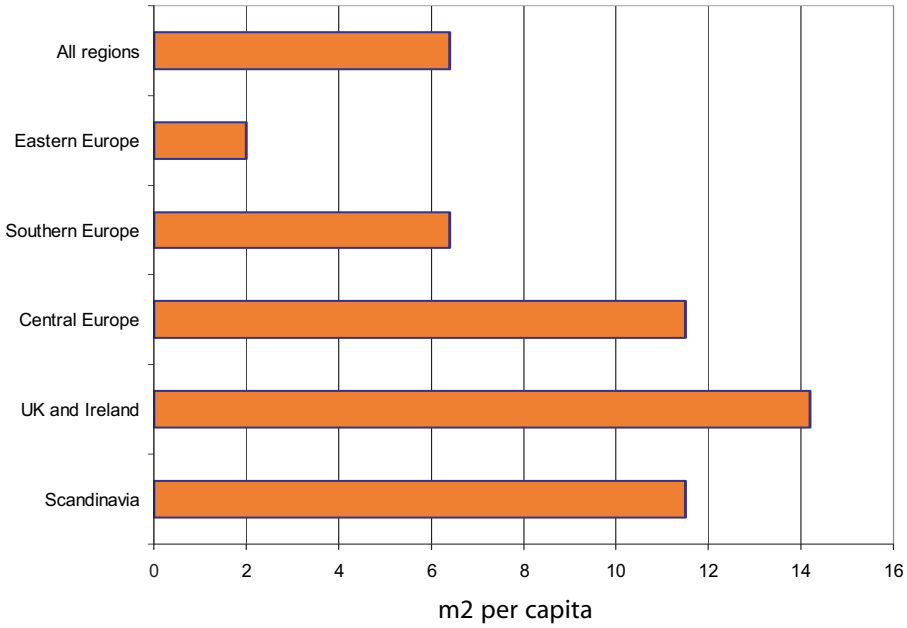
Business sentiment, which tended to fall in 2005, has shown a marked improvement since the second half of that year with label converters, material suppliers and labelstock demand all indicating improved performances.

FINAT's forecast for 2006 is that Eastern Europe will continue to show the most growth with more than 15 per cent improvement, Central Europe up by six to seven per cent, Southern Europe expanding by four to five per cent, Scandinavia having a three to four per cent improvement while the UK and Ireland would retreat by almost one per cent.

FINAT's counterpart association in North America, the TLMI, was represented by its chairman, Scott Pillsbury, who told delegates that his industry has just begun to recover from the world economic downturn after a hard-fought blitz on costs.

Last year the total US label sales totaled $5.71bn, of which

Consumption per capita, 2005



TLMI members took almost $2bn. Average profitability of TLMI members had continued to improve for the third year and median sales are at just over $10m.

Most companies responding to the TLMI survey employed fewer than 100 people and had a single factory – 'so small business is still a force in our market.' Pillsbury said that the high cost of equipment for small firms entering America's label market could prompt entrepreneurs to create co-operative arrangements between several operations, with each concentrating on one specialized aspect to present the market with a combined service. ■

Indian exchange

Jules Lejeune outlined plans to FINAT's congress to take a delegation of European label converters and suppliers to India to explore the possibilities of co-operation. The Euro-Indian Labelling Exchange program is funded by the EU's Asia Invest fund, which aims to promote the internationalization of European and Asian SMEs (small and medium-sized enterprises).

Lejeune described the Indian economy as the second fastest-growing in the world with over 1 billion inhabitants and a growing middle class. At the same time, the Indian government is easing legislation on foreign direct investments. These developments are driving Indian label growth to 25 per cent this year, with a total label market around 2 billion sq metres, dominated by wet glue.

The selection of participating companies and pre-matching of companies will be managed by FINAT, the LMAI and VskE. The matchmaking meetings will take place on December 6 and 7, following a seminar on the 5th December. There will be three meetings per day per participant, with each meeting lasting 50 minutes.

Gautham Kothari, joint managing director of Interlabels Industries in India, later gave a presentation introducing the Indian labels market and explaining why co-operation with label printers in the West could prove a win-win situation.

Tension control

Today's narrow web presses have the ability to process a wide range of materials from thin films to laminates and even carton boards, and this has placed increased demands on the tension control system. **Andy Thomas** reports on one supplier's solutions

With narrow web presses converting a wider range of materials than ever before – from unsupported films through to laminates and cartons – the role of the web tensioning system becomes increasingly critical. Heat sensitive materials like IML films and shrink label films demand much 'softer' tension than pressure-sensitive laminates, for example.

French-based tension control specialist Merobel has developed a range of products aimed specifically at these demanding applications. At Labelexpo Americas the company will launch in the US its latest range of Electromagnetic Powder (EMP) brakes equipped with a comprehensive range of cooling systems – a critical component in achieving higher linear speed – and the DGT 300 digital tension controller.

What are EMP brakes?

Electromagnetic Powder braking is a solution for applying variable torque in tension control systems. The braking force is provided by a powder which reacts to a magnetic field generated by a coil. Varying the powder's viscosity allows control of the torque transmission between the primary and the secondary rotors. The torque is proportional to the electric current, and independent of slip speed.

The technology has a history stretching back to 1951, when the invention was patented in the USA by Jacob Rabinow, who worked for the National Bureau of Standards during the Second World War. The patent was bought by Eaton, which sold licences to companies like Mitsubishi in Japan, AEG in Germany and Jaeger in France. Between 1955 and 1965, Jaeger worked to apply this technology in the automotive industry, especially for clutches in cars equipped with automatic gearboxes. This Jaeger division was sold to Merobel in 1985.

Multiple-fan blower kits dramatically improve the brake's power dissipation

EMP brakes and clutches are claimed by Merobel to be harder wearing than friction systems, and more cost-effective and easier to maintain than shaftless systems. Merobel says that because there are no moving parts except the powder in an EMP system, it is guaranteed maintenance-free for up to three years. EMP brakes do not generate dust, as the magnetic powder cannot be lost from the internal working areas – a useful system attribute where converters are going after hygiene/ISO 14001 accreditation, or in pharmaceutical applications.

Another target area for Merobel was quiet operation. They employed new surface treatments and formulated the powder to improve the already low noise characteristics of EMP technology.

Merobel engineers' understanding of the thermal behaviour of EMP has been dramatically improved by computerized thermal models of the brakes delivered by specialized CAD software. This allows the company to define precisely the temperature level in critical parts of the brake, and then choose the best solution in terms of cooling system – for example cooling fins, axial fan, radial fan, or water jacket cooling system. A recently launched option is multiple-fan blower kits, which dramatically improve the brake's power dissipation, thus increasing the acceptable level of requested torque and speed, while keeping noise level low.

As we have seen, a wider global torque range is becoming more important to match the increased versatility of narrow web label machinery. The range of materials which can be processed on the same machine leads to a wide variation in product tension. For example, printing from 12μm BOP to 600μm cardboard on the same press means a typical material tension variation from 1 to 20. This requires the EMP brake and clutch technology to offer a wide range of continuous torque. The key challenge is to decrease

the drag torque, and optimize the internal magnetic field to allow a better linearization of the required curve.

The tension control system also has to deal with a web diameter ratio between full and empty of around 1:10, while the width ratio can be 1:4

Merobel's EMP systems offer a global torque range of 1 to 1000 N.m, with a maximum power dissipation up to 10kW.

Controllers

A tension control system must include controllers and sensors capable of delivering a wide and continuous range of tension levels with up to one per cent precision. Web elasticity, the reel's rotational inertia, continuous or stop-and-go running, and a wide range of diameter variation are just some of the factors which need to be taken into account by a controller system to keep the tension control system stable.

Merobel latest DGT300 controller replaces its DGT2000 model, which sold over 1,000 units since its launch four years ago.

The DGT300 is designed for both closed loop and open loop tension control, and is applicable to unwinding, rewinding and intermediate tension control applications.

All web tension and other functions – such as soft start, hold & release, taper tension and no-stop splice turrets – are accessed via a user-friendly Windows PC interface, or from the front panel keyboard. Any number of these configurations can be stored and recalled on-demand.

Advanced regulation features include automatic PID coefficients variation, mixed open loop and closed loop control, inertia compensation, smooth start-up with programmable slope, as well as algorithms specific to individual motors and drives.

The DGT300 is compatible with any standard positional sensors and any kind of load cell technology, and is capable of fully digital calibration procedures. In addition, direct control of EMP brakes and clutches is available through the built-in power amplifier.

Maintenance and trouble shooting are carried out through a simple Windows PC interface. Outside maintenance teams can read and modify all parameters, and make data records of the inputs and outputs for easier troubleshooting. The small size of the files generated means they can easily be sent over the Internet to Merobel's specialized engineers. ■

Merobel and Redex Andantex

Merobel became a division of the Redex SA group in 1999. Through the global Redex-Andantex group, Redex was already involved in developing differentials, servo reducers, industrial gearboxes and automatic registration controls, so Merobel was a good fit.

Redex Andantex is a 330 employee group, owning three production plants in Europe and in the USA, totaling 14,000 square meters and including more than 100 CNC machine-tools.

While Merobel has OEM relationships with a number of narrow web press and rewinder machinery suppliers, the company has also been successful in retrofitting its systems to existing label presses and rewinders.

Resolving web handling problems – slack web, product stretching, loss of registration – by improving tension control is a cost-effective way to refurbish existing equipment or enhance performances of new equipment. It enables operators safely to increase linear speed, production quality and flexibility, and to reduce the waste rate. Retrofits now account for well over half of Merobel's global business.

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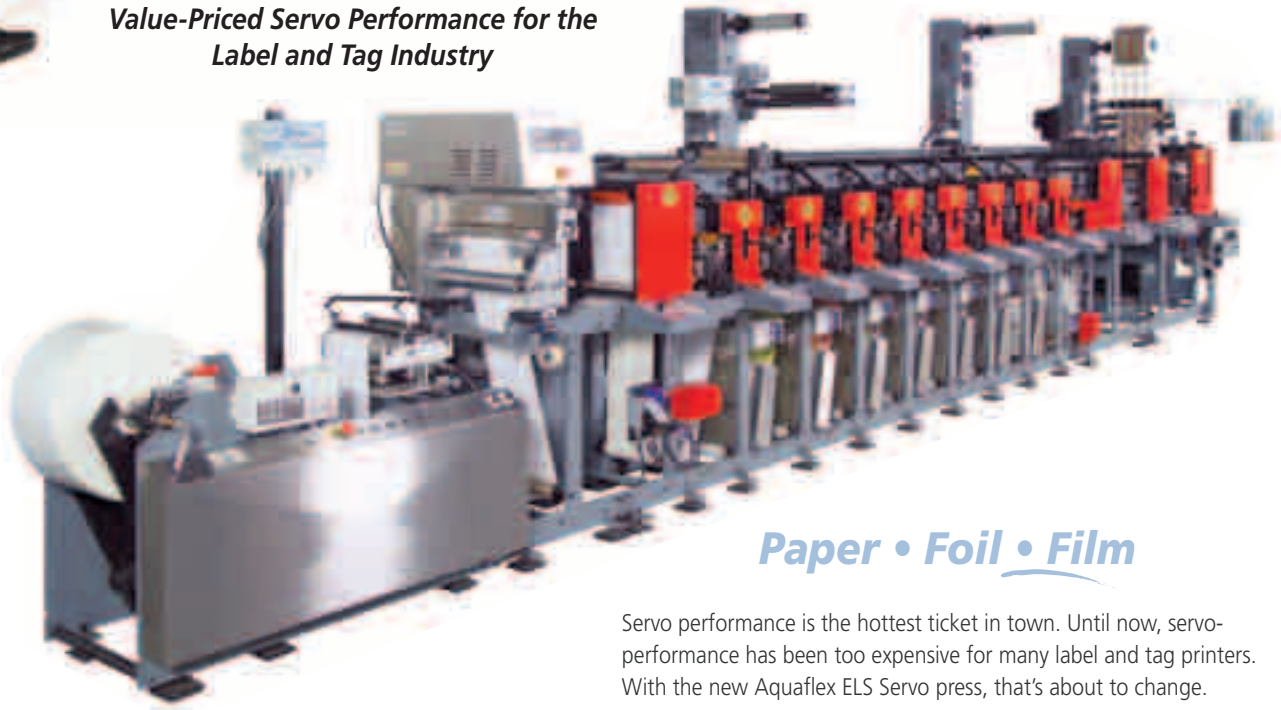

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Value added selling

Amberley Labels has embraced digital printing as part of a strategic move into management of end users' branding and fulfilment requirements. **Andy Thomas** reports

Since L&L's last visit to Amberley Labels in Dorset, UK, the company has reinforced its digital printing capacity with the purchase of a second HP Indigo ws4050 press. Today approximately 20 per cent of the company's work goes down the digital route. 'If we were without digital presses, we would not have been able to enhance our business to our current level,' says Gary Fitch, sales and marketing manager at Amberley.

Fitch gives an example of some labels featuring a subtle mottled white design produced for Marks & Spencer (M&S). 'This job could be run on conventional presses but it would be extremely difficult and would require a high skill level,' says Fitch. 'Using the ability of the digital press to adjust the intensity of each color and using our in-house knowledge made this process relatively easy. When we first pitched for the job with M&S they told us not to bring digitally printed labels because they regarded them as poor quality. We subsequently won the business for this large range of work.'

One of Fitch's jobs is to be more pro-active in selling the broader capabilities of the digital press to end users.

'In the case of M&S, the designer came down and spent a morning on the HP Indigo press. He can now see how digital can help him achieve great results against conventional, potentially saving thousands on design and rework fees, on plates and reduced waste.'

M&S is a good example of the different routes to market for Amberley. 'Sometimes our customers will specify the label design directly, then find a label converter to print it, or may also subcontract the whole process to a packer-filler, including specifying the label. It is therefore very important that we build strong relationships with both the contract packer filler/manufacturers and the end users.'

M&S is also a good example of how Gary Fitch has changed Amberley's approach to selling.

'Account management skills are more important than selling skills,' asserts Fitch. 'This industry has always been about a more traditional style of selling, via good salesmen. But in the last couple of years we've changed our focus to customer relationship management and customer service. People are prepared to pay a premium to get that service.'

The history of Amberley reflects this movement from 'technical' sales to 'CRM sales'. Four years ago, the company was a typical technology-driven print shop, run by a single proprietor who was proud of his company's technical skills in areas like color mixing.

'In those days it was all about manufacturing quality products. Today that quality is taken for granted by our customers so has no value as a selling proposition.'

Following a management buyout, Gary Fitch – who came from the consumer electronics sector – started to implement the new, customer focused strategy.

Relationship building is the key. 'How do you keep your customer; how do you keep their level of interest high? You need to be asking questions up front, Why try to second guess

Gary Fitch, sales and marketing manager at Amberley Labels

Amberley Labels has re-organized its work area into cells, in line with lean manufacturing practice

Comfort zones

Gary Fitch says Amberley is unlikely in the short term to move out of its self-adhesive labels comfort zone into film-type products such as sachets, shrink labels and wraparound labels, despite the fact that the two HP Indigo ws4050s are capable of handling these thinner substrates and Amberley fully understand these processes.

'The question is more about marketing and business strategies. Do you really understand these products? Do you understand the market or the technologies, and do our customers want this capability from Amberley? At the moment they do not, but when they do, then we are ready.'

In product marketing terms there are four main areas to look at.

- One, you know the markets and you know the product. Typically this is where most companies operate.
- Two, you know the markets but you do not know the products, If there is a demand and you can learn or buy the product, this may be an area to develop.
- Three, if you know the product but do not know the market, again this may be an opportunity.
- The fourth option is where you do not know the market or the product. This is a very risky area to work, but could return some great business, if you are prepared to risk it.

Taking the example of digital printing, Fitch says that the real benefits in our markets are not personalization or short runs. 'I'm not interested in personalization. What I am interested in is offering a unique solution to our customers that can not be achieved using the conventional process. This may be in the form of running thousands of different labels in one pass. or producing as many labels that are required at that time without the need to hold stock, reducing the time to run, running more jobs and providing the customer what they want.'

Fitch is careful to target added value sectors, typically cosmetics and toiletries, and he is now looking at the specialist food and healthcare sectors. 'We already do supply to many different markets where we can apply the company's existing sales strategy and technology.'

them when you can just ask?'

Fitch drums into his team the motto 'We do not produce labels, we produce the face of your brand.'

In order to move the conversation into this territory, it is essential to move past discussions on price with purchasing gatekeepers.

'On initial contact with a customer, inevitably this is with purchasing people who are traditionally the people who understand printing,' notes Fitch. 'They want to know what is the print process, what press it will be produced on, delivery schedules etc and are always price-driven. This should not be a surprise, as this is their job. By contrast, the marketers and brand managers are more interested in their brand image and about shelf impact. We have got our biggest successes by working directly with the buyer and the brand/marketing manager.'

How is this achieved? 'Well there is no golden rule on this. In most cases it is important to work with both the purchasing team and the marketing/design teams. The stronger your relationship with the marketing/brand teams the more they will help influence the final decisions. If you get involved in a conversation about price alone, then in our case it is typically the wrong customer for us, and there are generally no winners.'

Fitch gives an example of an egg producer, who asked Amberley to pitch for a job on price. 'Instead of competing for the business on price alone we worked on a solution / branding offering, this resulted in a proposal for a new design for the label, a design which has now been approved at around the same cost as his original label. Once he had seen the new and improved label design, he wasn't going to go back to the old one. This style of proposal set us apart from our competition and set a precedent about how we wanted to work with that client.'

More end users are starting to realize the benefits of value added partnership, according to Fitch. Boots is another good example.

'First contact with Boots is usually via their purchasing group. Initially there is a period of discussion on you as a supplier, if you meet their very strict requirements then you can move on to discussing the opportunities. But they have also learned to get the brand manager involved. This enables them to make sure that their full requirements on design, brand control and application are achieved. Once this is achieved you are passed back to purchasing to discuss costs.'

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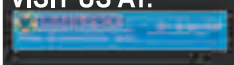

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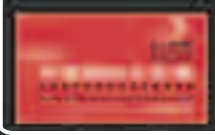

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"Even when e-auctions only involve selected companies invited by the end user, you still don't know how many people are involved and what figure you are bidding against"

In a bold move, Amberley challenged Boots on its practice of holding internet auctions.

'Boots have been doing on-line internet auctions for the last 18 months. This enables them to drive the cost of labeling down. As a key supplier we made a business decision that this did not fit with our drive towards excellence in supporting the customer and said we will not tender on-line. After a period of discussion, Boots said they still wanted us as a supplier, and now the purchasing manager comes to Amberley to tell us what opportunities are coming up and lets us know what their requirements are.'

E-auctions are always bad for an added-value sell, says Fitch: 'You have no control, and no complexity or expertise is involved. Service levels and quality don't enter into it. It is simply for commodity products, and that's not where we want to be.'

Participating in e-auctions can also be a frustrating and time-consuming experience. 'Even when e-auctions only involve selected companies invited by the end user, you still don't know how many people are involved and you have no idea what figure you are bidding against. As a typical example Boots auctions can last 20 minutes for the initial bidding process, but if a new bid arrives in the last period of the allotted time, the time is extended by two minutes, so the whole process can take around 45 minutes to an hour. Looking at the biding price on our second encounter with an e-auction, we decided to see what level we would have to go to to win the business. We entered a final bid at our cost price and we were not even close to winning the business! There was no way that the eventual winner could make money from the job.'

Fitch points out that in some cases when business is low it is often better to win business to keep your presses running, generating turnover but actually not contributing to your bottom line. Typically only the biggest companies can afford to take on this sort of work.

Digital vs conventional?

Gary Fitch will cheerfully admit that he is not interested in technology, despite coming from a technical background, He has no emotional ties to any print process and has no problems with a fully digital future if that provides customers with the service they are looking for.

'Potentially if the markets are right in 4-5 years I don't see any reason why we should have any conventional equipment. Up to then conventional will run parallel to digital, but in that period companies that don't invest in digital will fall behind.'

Amberley currently runs water-based and UV Flexo on its Mark Andy presses, and letterpress on Kopack rotary and Delta intermittent machines. Most new business, however, goes down the digital or, occasionally, the Flexo route, and Fitch estimates that 95 per cent of the work which is still conventional could go digital. 'We are already achieving fantastic results on the digital process that are better that conventional, and as technology improves then we can offer more. However we still have to convince the customers. "Traditional" label buyers are still a huge obstacle, because they like products which are produced using processes they understand, Flexo, letterpress and screen. But digital is now more established and robust, and people are becoming more aware of itscapabilities.'

Fitch identifies areas where digital still needs to make progress, particularly finishing, automated workflow and color matching.

'At the finishing end we currently have "to do a little work" and we need more automation. We also need more front-end automation. This is already happening at the press, now we need to improve on the sales side.'

Color matching is critical for Amberley, particularly in the cosmetics sector where lipstick and eye shadow labels form a large part of its business. 'There might be 50 shades of lipstick or eye shadow to be matched when a new product range is launched, and on the digital process we can't match these shades to the level we need at the moment. If we could, then 90-100 per cent of this work would go to digital.'

Fitch believes that at the moment conventional printing is 'filling holes' where the digital process falls down - for example in the need to use screen whites on clear films. 'If digital inks were more opaque, you would not need screen any more.'

One consequence of the move to digital workflows is the movement of skills from the press to job preparation and finishing. The need to invest in the right people has become an additional requirement for medium-sized companies such as Amberley.

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Barcodes vs RFID

With RFID being hyped as a replacement for barcodes by some commentators, **Mark Beauchamp,** European marketing manager for Citizen Systems Europe, argues that barcodes are likely to remain the key product ID format for a long time to come

In today's fast moving, technology driven environment, Radio Frequency Identification (RFID) has been a hot topic for some time, with considerable rhetoric designed to talk up the technology and its, as yet, largely unproven benefits. In the rush to jump on the new technology bandwagon, many companies are rejecting the humble barcode in favour of RFID, without considering that for many packaging, logistics and retail companies bar codes are not obsolete and that existing systems offer a proven and cost effective, although perhaps less high profile, method of stock and product management.

The current frenzy of excitement surrounding RFID is based upon the theory that it provides a host of benefits for both manufacturers and retailers, such as improved product safety and increased retail availability, better security and more effective management of logistics in warehouses.

However, many companies have recognized that most of these benefits remain unsubstantiated, leading to caution and, in some cases, confusion as to how and where RFID can add measurable value to a business, given the large investment involved.

In some cases this is due to a simple lack of information, or the belief that the benefits of RFID have not yet been proven in real life applications. Or simply due to the fact that the initial investment cannot be justified against the benefits.

Research has often shown this to be the case. For example, research carried out in 2005 by KRC on behalf of BAE Systems, found that just one third of 150 companies surveyed in the UK and Finland could see tangible benefits in implementing an RFID strategy. Sixty per cent of those agreed that RFID was a promising innovation but that the potential benefits were unclear and poorly understood. In addition, a separate research project undertaken by Easyfairs UK found that only 17 per cent of leading food companies are currently using RFID or have plans to implement a system within the next year.

Indeed, what is not always recognised is that a traditional 1D bar code holds as much information as an RFID tag, while the latest 2D bar codes hold more information than EPC tags. These 2D data matrix bar codes are especially well suited for process control.

> "The latest generation of barcode technology offers a number of cost effective methods of stock control, tracking, management and even traceability"

Perhaps as importantly, although RFID can represent an important step forward in technology, its supposed benefits are currently only available at a cost; for example, the cost of RFID hardware is four times that of comparable bar code equipment, while the cost of applying an RFID label is eight times higher.

It's hardly surprising that many companies, while being attracted to the idea of innovation and the prospect of better stock control or product traceability, have been slow to change. While the reasons for this are varied, the fact remains that RFID has a long way to go before it is fully implemented throughout industry. In the meantime it is important that companies do not lose sight of the benefits of using the latest generation of barcode technology which offers a number of cost effective methods of stock control, tracking, management and even traceability.

One of the most widely promoted benefits of RFID is that the technology allows tags to be scanned at greater distances than

Citizen Systems
Citizen Systems Europe offers a wide range of thermal printers for industrial, retail, healthcare and mobile barcode and labeling applications. It is a wholly owned subsidiary of Citizen Systems Japan and part of the Citizen Watch Company of Japan, a global organization that manufactures products ranging from watches, mini-printers and industrial printing systems, to machine tools, quartz crystals and oscillators.

traditional bar codes, which typically require a proximity reader. The advantages of this, especially in the retail sector, are obvious, but in the majority of applications a simple bar code scanner can be more than adequate and is considerably more reliable, as the failure rate of bar codes is almost zero, compared to the five per cent to 12 per cent failure rate that is typical of RFID readers. In addition, up to 30 per cent of RFID read errors result in requiring a reprinted tag.

Other advantages of traditional bar code systems include the fact that the technology has been in use for a number of years and, as such, is proven to be reliable and suitable in a wide range of applications, while at the same time meaning that staff across the board, from junior warehouse and shop floor employees to senior management, are familiar and competent with its use. Similarly, the technology is compatible and fully supported internationally and thus can be standardized across international borders.

Another benefit of the widespread familiarity with bar code technology is that standard equipment is easily available at competitive prices from a large number of suppliers, with both hardware and software being easily available, backed by a wide range of market and technology experience. The number of experts familiar with RFID is considerably lower, while choice of both equipment and suppliers is much smaller.

Due to the reluctance of industry to fully adopt the RFID system, demand is still below the point where unit costs can be driven down to the level where implementation of a system is financially viable for the majority of companies.

For example, the overall cost of purchasing and implementing an RFID system is generally estimated to equate to a cost per tag of more than eight times that of a bar code system performing the same function.

In addition, traditional bar codes are simply ink printed onto a paper or plastic substrate rather than the complex chip and circuit arrangement found in RFID. As a result bar codes are far more hardwearing and resistant to handling and

"The failure rate of bar codes is almost zero, compared to the five per cent to 12 per cent failure rate that is typical of RFID readers. In addition, up to 30 per cent of RFID read errors result in requiring a reprinted tag"

logistics damage and are capable of performing in areas with extreme or widely fluctuating conditions, such as freezers.

Another interesting point is that many players within the industry perceive that up to 50 per cent of RFID systems being implemented currently will fail within the first three years, incurring massive expenses that will not be recouped. The reasons behind this vary from the complexity and lack of knowledge surrounding RFID to the need for a complete cultural change within the supply chain, driven by internal and external factors ranging from trends in internet shopping to organizational downsizing. One thing that remains undisputed is the fact that many of the problems associated with RFID systems are not present in comparable bar code systems, which can be installed and upgraded at low cost and require far less costly management control and extensive employee training.

One final point is that the 'big brother is watching you' concern, voiced by various consumer groups, can be applied to the technologically advanced RFID systems. As California State senator Debra Brown said in 2003, 'how would you like it if, for instance, your underwear was reporting on your whereabouts?' While this may seem somewhat farfetched and slightly amusing, companies are all too aware of how consumer pressure groups, however ill informed, can affect consumer opinions and lead to consumer boycotts, demonstrations and adverse publicity for high profile projects.

Taking into consideration all of these factors, the future for bar codes does not look so bleak. In fact one likely scenario is that the demand for both bar code and RFID systems will increase in the coming years, with different market sector demands driving system design and new product innovation. ■

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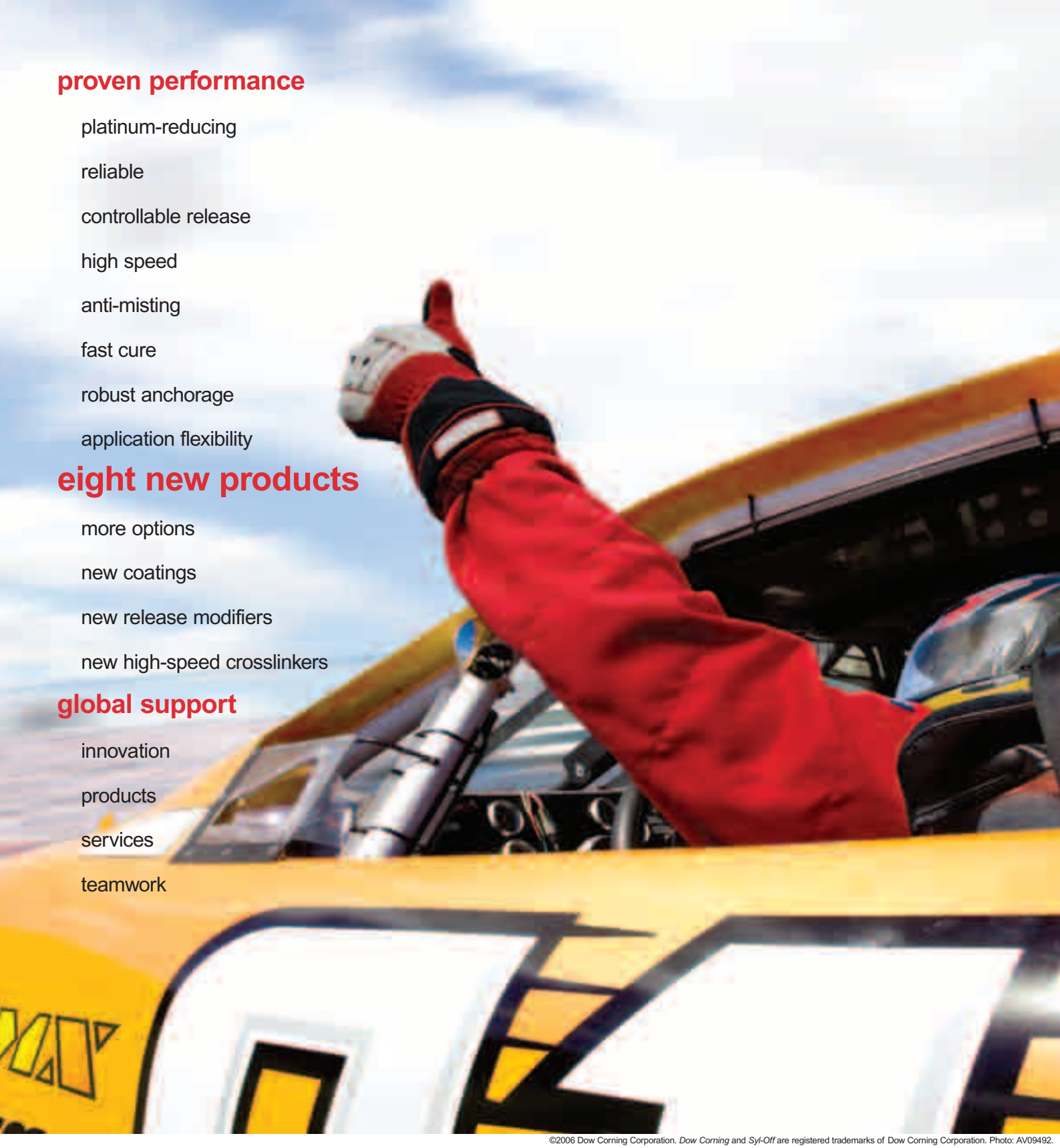

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Herma invests in automation

Pressure sensitive laminate specialist Herma is expanding its capacity with what is expected to be the world's most advanced coating line. **Andy Thomas** reports

As it celebrates the centenary of its founding, German pressure-sensitive label manufacturer Herma is planning a world class coating investment.

The new coating plant – expected to be completed next year – will take workflow automation to a new level in what is expected to be the world's most advanced coating plant. Representing an investment in its first stage of Euro 30 million euro the expansion will increase Herma's capacity from its current level of around 250M square meters to 750M square meters a year.

The new line will be a two-meter wide curtain coater designed to coat paper reels at up to 1,200 meters/minute, with further speed increases to follow. The plant is planned with a unique 'shortest path' materials flow, with all materials handling fully automated.

The coater will be situated along the full length of the first floor of the new building, with all roll handling – from materials in to finished materials out – on the ground floor. The coater will be fed by robotic roll transport systems, removing all manual handling from the coater level. Not only will this greatly increase efficiency, it should also eliminate roll damage. Just five operators per shift will run the whole coating plant.

The new coating line will be linked to Herma's existing automated logistics center by a screened off tunnel, allowing a 'clean room' environment to be maintained in the production plant. 'We will be able to bring rolls from the slitting area or from the warehouse directly and robotically to the coating plant,' says Dr Thomas Baumgaertner, managing director at Herma.

As well as improving productivity, the system has reduced the incidence of damaged rolls. In the future, it will tie into an e-business network which will allow customers to order finished rolls electronically.

Herma says its new plant will be highly energy efficient, with around 30 per cent of the coater's energy emissions recycled through heat exchangers to the dryers. Indeed, environmental management comes high up the list of priorities at Herma. Its label papers are manufactured only from chlorine-free bleached cellulose and it uses solvent-free silicones and adhesives. The company is certified to ISO14000 environmental management standard.

The new coating plant is just one element of a complete re-engineering of the Herma operation along Lean Manufacturing lines. This includes sales process, purchasing – where supplier qualification began last year – and logistics, working on JIT delivery and remote stock control.

'The objective is to decrease stock holding and encourage daily deliveries from suppliers to help a more flexible production schedule controlled by SAP,' says Manfred Minich, CEO and managing director at Herma. BASF, for example, now monitors and restocks tanks on-site with PSA raw materials without any intervention from Herma.

'Our ultimate aim is to enhance customer service through more flexible production and delivery, which Herma sees as a key differentiator against our larger scale competitors,' says Manfred Minich.

Herma – a profile

Still a family owned business, Herma has carved a successful niche as a medium-sized supplier of specialist self-adhesive

laminates and commodity computer labels. Today the company employs 800 people located in three plants around Stuttgart. It has a turnover of around Euro 183 million and exports just over half its production to 77 countries. It has subsidiaries in France, Austria, the Netherlands and the UK – which accounts for similar sales volumes to Germany.

Herma is also strong in Eastern Europe and the CIS states, for example claiming 50 per cent market share in the Ukraine. The company has an Asian presence through Herma KDC in Singapore.

Last year Herma's coating facility in Filderstadt-Bonlanden produced some 250M square meters of self-adhesive material, of which three quarters was supplied to outside label printers and 25 per cent converted and used within the company's own label printing operations. The company fights hard against any perception that it is treating its own printing units differently from outside label printers as regards delivery times and prices.

Within Herma's production mix, film products have been growing more strongly than paper – showing growth rates between 30-35 per cent over the last two years, and now representing around 11 per cent of total production. By the end of this year, that figure will be closer to the European average of 15 per cent film/paper ratio.

Herma's self-adhesive materials division accounts for 40 per cent of the company's sales and has regularly posted double digit growth figures – a growth rate two to three times the European average.

Herma's industrial labels division services the electronic, commerce, logistics and manufacturing sectors, with a particular expertise in automotive labeling, where the Deizisau plant is undergoing certification to TS16949. Examples of innovation here include a special closure label for the world's leading manufacturer of motor components which does away with the time-consuming manual operation of inserting plastic plugs into apertures to protect them from contamination by succeeding processes.

Automated transport, warehousing and product management systems are another specialist area, where Herma has developed multi-part labels with removable vouchers containing product ID data. 'The increasing speed and internationalization of complex distribution systems represents new challenges in labeling and security,' says Manfred Minich. Smart labels, including RFID, are seen as an important development in this area, and Herma can already offer a wide range of security techniques including embossing, Lumino-phores codes, biocode – a 'lock and key' DNA system – security inks and materials.

As well as manufacturing and printing labels, Herma also manufacturers its own labeling machines, from simple hand dispensers to complex labeling lines.

Herma has a long history of technical innovation. It was the first German company to offer self-adhesive price labels in 1951 under its original founder Heinrich Hermann, diversifying into computer labels in the 1960s. In the mid-1990s, the company claims to have been the first to adopt UV acrylic dispersion technology, and in 1999 pioneered non-contact curtain-coating technology for the emulsion coating of films and paper. Curtain coating involves a wafer-thin curtain of adhesive flowing down into the siliconized release liner. It produces non-structured and uniform coating at speeds up to 800 m/minute.

> "The objective is to decrease stock holding and encourage daily deliveries from suppliers to help a more flexible production schedule controlled by SAP"

In 2005 Herma pioneered a new generation of acrylic dispersion adhesives, called 62G, claimed to have huge potential in cool and damp applications. 62G adhesive brings together the benefits previously offered separately by acrylic dispersion and hot-melt adhesives, according to Dr Baumgaertner.

'It is not only compatible with converting requirements, like other dispersions, but also exceeds the performance of hot melt adhesives as regards tackiness and final adhesion, especially at very low temperatures and when labeling curved surfaces.'

A major source of innovation at Herma – alongside the company's own R&D labs – are partnerships with key suppliers, including BASF, which manufactures UVA adhesives to Herma's recipes. Around 60 per cent of Herma's production is for bespoke products, and a key benefit of the new coater will be to free up capacity for R&D on the existing coating machines.

Other examples of partnership working include one of the first systems for in-line measurement of silicone coating on coated kraft liners back in 2004, a project to reduce downtime on slitting equipment by 90 per cent when changing reels, ■

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Green and clean

Metro Label turned to the MicroClean System for an environmentally friendly way to clean anilox rolls. **James Quirk** reports

Environmental responsibility ranks high on the list of Metro Label's corporate values. In August of last year the pressure-sensitive label producer relocated its Toronto plant to a new 132,000 square foot building and became the first corporation in Canada to receive Leadership in Energy and Environmental Design, or LEED, certification. This recognition is awarded by the Green Building Rating System to companies for their outstanding efforts in designing eco-friendly workspaces. Metro Label was also the first Canadian company to implement ISO 14001, a voluntary adoption of stringent international guidelines to minimize pollution and maximize energy use.

When it came to standardizing its four manufacturing plants, Metro Label turned to the MicroClean System for cleaning its anilox rolls.

The company first became familiar with the MicroClean System when Metro Label acquired two divisions of InvestPrint in 2004 and 2005. The acquired plants in Napa Valley and Montreal were using MicroClean machines to clean their anilox rolls using a recyclable plastic media that can be recovered via a built-in hopper and reused. Metro Label had been using chemical solvents to clean the anilox rolls in its Toronto and Langley plants, but welcomed the opportunity to convert to a more environmentally friendly method in keeping with its corporate philosophy. Executives purchased two additional MicroClean Systems from Flexo Concepts in Plymouth, Massachusetts, opting for model 48 which is specifically designed for narrow web application and the one most often chosen by tag and label printers.

The MicroClean System, which uses plastic pellets to gently remove dried ink from anilox cells, thoroughly cleans both ceramic and chrome rolls with line counts up to 1,500 repeatedly without cell damage. Because the pellets physically enter the cells to pick out the contents, this system can be used to remove all types of inks and coatings regardless of their chemistries. Unlike some other blast medias and cleaning solutions, the plastic pellets are non-abrasive and can't damage the delicate cell walls of the anilox roll. As an added bonus, the media is recyclable; after cleaning a roll, the pellets are reclaimed for future use. There is no dust or harsh chemicals which could be dangerous and require special disposal, which could compromise a company's 'green' status.

Matt Schwanebeck, the general manager of Metropolis Label, the Metro Label facility in Napa Valley, knows the value of clean rolls. His plant uses anilox rolls to apply water based and UV coatings to its products. 'Although the plant has only seven stations to apply the coating, the ability to provide a consistent application each and every time is vital: even the slightest variation can result in rejections valued at tens of thousands of dollars,' states Schwanebeck.

The MicroClean System is able to clean both ink types thoroughly and ensure an even coating application every time, guaranteeing peace of mind that alone justifies the investment. Furthermore, the environmentally friendly aspect of the MicroClean system is crucial to Metropolis Label in that it enables the company to maintain its 'green' standing and remain in compliance with California state law., 'MicroClean permits us to maintain an efficient production despite having to work to exacting standards with difficult materials,' concluded Schwanebeck. ■

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(Left–right) Plate profiles of staggered plates are cut on a Esko's Kongsberg XL20 plotter/cutter, DG's staggered plate mounting method gives a near gapless approach for continuous printing and in-line EZCure electron-beam curing unit from Energy Science Inc

DG's offset package

Drent Goebel, and a few friends, recently held an open house at its Montreal facility to raise the profile of sleeve-based offset printing technology for packaging and labels. **Barry Hunt** reports

Almost a year after Drent Goebel acquired RDP Marathon, its premises in Laval, near Montreal, have become the main technical center for DG's USA/Canadian operations. It was also the venue for an open house, held 22-27 June. Over a hundred packaging printers from all over the USA, Canada and further afield turned up to see a seven-unit variable sleeve offset press (VSOP) equipped with electron-beam curing put through its paces. DG also showed its unique approach to 'gapless' offset sleeves, supported by assorted demonstrations and workshops from over a dozen of business partners.

With full technical support, parts and service now in place, Drent Goebel North America seeks to compete strongly in the mid-web flexo and gravure packaging press market. To that end, Hubert van den Huevel, former technical director in Eerbeek, recently located to Montreal as DGNA's president. Among the press models offered by the group, the servo-driven VSOP is the undoubted star. Around 40 have been installed during the last two years, including six in North America over the past year. The press can run up to 400 m/minute (1,200 feet/minute) and comes in three maximum web widths: 520mm (20.5 inches), 850mm (33.5 inches) and 1,250mm (49.5 inches). The advantage of sleeves is that they allow users to change sizes easily without completely changing the unit. Only two sleeves are changed when switching repeat lengths, which on the VSOP 850 demonstrated at the Open House are variable between 15-30 inches.

DG has targeted four distinct market sectors:

- Flexo and gravure printers of food and non-food flexible packaging
- Offset printers of wrap-around and beverage labels, pouches and envelopes
- Sheet-fed offset printers of paper wet-glue labels, in-mold labels and folding cartons
- Narrow-web converters of pressure-sensitive labels and folding cartons seeking to increase capacity

Destined for an unnamed Mexican packaging printer, the demonstration press included a Martin Automatic unwinder and non-stop rewinder, Teknik film cleaner, seven offset units with sleeve cylinders and a Tresu in-line flexo coater. The wet-trapped inks and coatings were cured instantaneously using an EZCure-1 electron-beam unit supplied by Energy Sciences Inc. Eltromat's Offcon III system gave fully automatic and integrated camera-based control over print and die cut register and video web inspection. It also automatically presets the ink fountain keys, either singularly or in groups, based on CIP3 data conversion files. Separately, Eltromat displayed its new Densicon ink density controller, which like the Offcon system can be configured to form part of a closed-loop system. Although readings are taken from color bars, the company says it is developing an alternative data input method.

Developed from the earlier shaftless Vision concept, the VSOP uses centrally-controlled servo drives for all the printing, coating and ancillary functions. DG showed how the technology allows fast changeovers and minimum wastage across a range of substrates; in this case rolls ranging from 12-micron PET film up to 320-micron board. It also highlighted the ease and speed with which operators can change the lightweight Rotek sleeve cylinders.

The demonstration plates were Kodak's Sword Excel thermal plates, digitally imaged on an eight-page Trendsetter 800 II Quantum platesetter. The company also presented the Prinergy Powerpack workflow system, Staccato screening software and Spotless software tool. The latest Version 2 allows printers to reproduce a wide spectrum of spot colors based on designers' PDF files using five or seven-color process sets. The fact that UV or EB-cured offset can achieve high standards of color depth, clean vignettes, pin-sharp images and legible positive or reversed text in the smallest of sizes was a message that DG was keen to put over. Another was that while UV-cured and water-based flexo also use environmentally-friendly non-solvent inks, offset platemaking offers a cheaper and faster alternative to photopolymer flexo plates. However, in the package printing world, offset plate lockups leave a non-printing gap of 2-3mm. This has tended to inhibit the process when compared with engraved gravure cylinders, or flexo seamless sleeves, when printing many packaging products.

Gapless plates

To overcome this problem, DG developed a novel method of plate mounting applicable to all VSOP presses. The procedure involves cutting staggered profiles along the plate's leading and trailing edges in accordance with the printable image. When mounted on the sleeve cylinder, the plate presents a near-seamless effect. At the Open House, the process involved a Kongsberg XL20 plotter/cutter from Esko to produce clean-edge cuts using a high-speed milling head. The same flatbed machine, again using a PC to control contour data, also prepares the offset blankets, but with a knife blade fitted in the cutter. A new offset sleeve mounting system developed by DG with Tapir, a Dutch supplier of tapes and adhesives, completes the procedure. A special double-sided PET mounting tape from 3M creates a strong bond between the sleeve cylinder and plate.

The presence of a relatively compact EB curing unit in the press line created predictable interest among visitors. According to Edward Maguire, VIP/general manager of Energy Sciences Inc, the unit represented a breakthrough for EB since it cured flexo and offset inks applied to any substrate. 'The units have a variable power supply to match press speeds and the system is simplified by being either "on" or "off". There is no degradation in the life of the filament chains and managers can generate scheduled reports on usage and downtimes.' He added that the special inks do not require photo initiators, have a high viscosity and are very opaque. 'EB systems do not use lamps and require a third less energy compared with UV-curable inks and one half the energy required for hot-air drying.' Nevertheless, he acknowledged that the technology was more economically feasible for presses over 520mm wide. Since oxygen retards the curing process, EB systems require a pressurized curing chamber, or one filled with nitrogen or a similar gas (as shown by Air Liquide).

Etienne d'Hauwe, DG's owner/director, and Barry Hunt with the sleeve mounting machine

Loading an offset sleeve cylinder into one of the seven print units on the Drent Goebel VSOP

Sun Chemical and Wikoff Color Corporation supplied the EB inks used during the press demonstrations. Other exhibitors at the Open House included IST Metz for those sticking with the more familiar UV curing. Karlville showed an off-line film sleeving device with continuous unwind, capable of reaching 300 m/minute. A similar speed is reached by the 520C sheeter with variable-size cut-outs shown by Ehret Controls. It forms part a range of label and packaging finishing equipment, including in line folders and pile or batch stackers.

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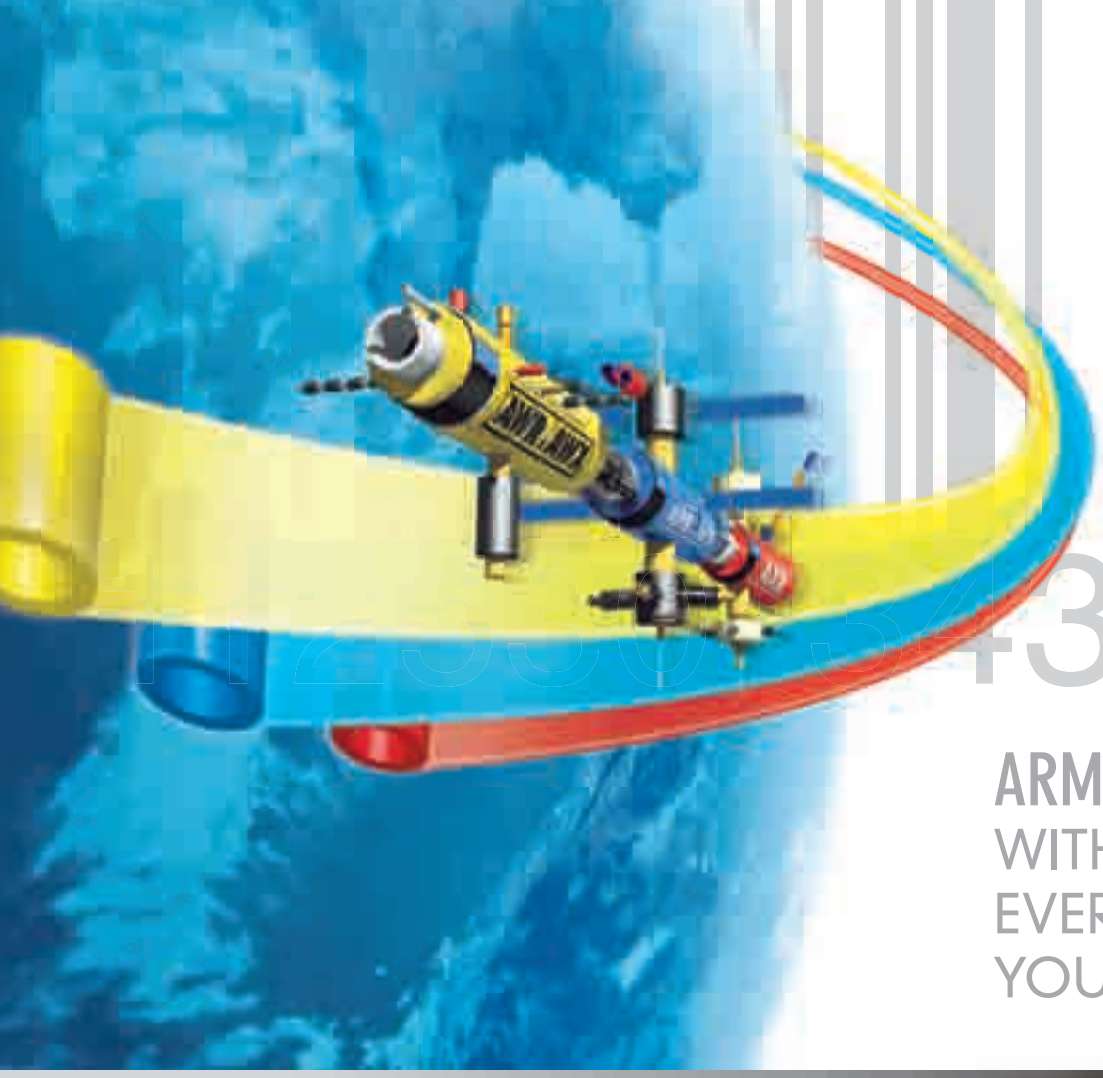

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New products

The Colorsat Match ink dispensing system from Stork

RK Print
Esiproof

RK Print Coat Instruments Ltd has released a hand-held trouble shooting color matching device that can be taken from machine to machine. The Esiproof is a compact hand held precision unit into which an anilox roller, EPDM stereo roller and doctor blade are fitted to enable the user to obtain realistic, high quality flexographic proofs, up to one meter in length. The use of a doctor blade enables the proofing of all flexo inks including high viscosity UV curable inks. The unit enables color proofing for both customer approval and spectrophotometer readings.

MD Tom Kerchiss says that the Esiproof has been modified to make the already competitively priced device even cheaper, but without compromising on performance. For instance the micrometers used for adjustment have been replaced with springs. Highly adaptable, the Esiproof can be supplied with ceramic laser engraved rollers from 140 to 800 cells per linear inch or with mechanically engraved steel (QCH type screen) and chrome plated anilox rolls. Both ceramic and steel anilox rollers are interchangeable.

UPM
Vellum and Jetlabel face paper

UPM is introducing two new grades of label face paper. The uncoated, surface-sized UPM Vellum and UPM Jetlabel make the selection one of the most diverse on the market.

UPM Jetlabel is a grade tailored from envelope paper to the label end use. The surface properties of the paper have been developed so that they endure the adhesives better. Vellum is a material generally used by industry for logistics labeling.

Stork Prints
Colorsat Match ink dispensing system

Stork Prints launches an easy-to-install, gravimetric ink dispensing system, which aims to help users of relatively low ink volumes to deliver spot-on color accuracy, keep waste to a minimum and reduce ink formulation times. Colorsat Match has a dispensing range up to 10 kg and has the capacity to mix inks from at least 12, and up to 20, components. It is suitable for dispensing UV-curing and water-based flexo, screen and gravure inks with viscosity up to 2500 mPas (2500 cP).

With its proprietary Windows XP-based Ink Management Software (IMS) software, Colorsat Match makes precise formulations so the printer can deliver the most challenging of colors to brand owners' exacting specifications, and at extremely competitive speeds. Typically, a 5 kg recipe formed out of four components is dispensed in between three and four minutes.

The SDI WCN3 narrow web cleaning machine

CTC International
Model C-TAB-62-10 'Turretmaster' automatic butt splicer

CTC International has introduced its Model C-TAB-62-10 'Turretmaster' automatic butt splicer. The splicer is suitable for splicing a variety of materials including tag, label, board, film stocks, and other materials. The heavy-duty cantilevered turret unwind design allows rolls as large as 62" in diameter to easily be processed.

Splice prep procedure is simplified via slide out splice tape applicators that allow for in-aisle splice tape preparation. The splicer does not require the use of tape trimmers. The unit also features industry standard PLC control.

A standard feature is automatic 'Gapless' butt splicing of the web with two pieces of tape (one applied to each side) for maximum security. The two splice tapes are applied very close to each other in the process, further minimizing the possibility of a missed splice. The machine can be prepped to make a one-sided tape splice if desired.

The machine will be offered to accommodate a variety of roll sizes, line speeds and other process requirements, including CE Compliance and an option for splicing in register.

SDI
WCN3 narrow web cleaning machine

SDI has announced the introduction of its latest generation narrow web cleaning machine. The WCN3 is the most compact version of this machine to date and maintains the strong, industrial construction the company is known for. The company brought all of the controls for the machine to the front, making it easier for the technician to operate the cleaning machine. The WCN3 is also available in a top-clean only model and can be equipped with SDI's silicone-free cleaning system.

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Alliance launches inkjet solutions

An alliance of GRE, Impika and Chromos aims to develop bespoke inkjet converting systems aimed directly at narrow web label converters. **Andy Thomas** reports

One of the most exciting areas of development in digital printing is the growing number of inkjet applications aimed specifically at the narrow web labels and packaging market.

An alliance has now been launched involving Impika, GRE and Chromos, which aims to take DOD UV inkjet systems and build them into converting lines specifically tailored for the narrow web labels and packaging sector.

GRE Engineering is well known to label converters for its specialist conversions of Gallus R160 and R200 letterpress machines. L&L recently covered the launch of GRE's Digital Printing Solutions division, which builds, in China, digital label converting systems based around HP's VIPColor solutions. GRE has developed a particular expertise in mixing and matching these digital print systems with a wide range of specialist converting modules on the same line, including booklet and RFID inserting units, hot melt and silicone coating modules.

Less well known in the narrow web market up to now has been French inkjet specialist Impika Jetting Solutions. Based in Aubagne, near Marseilles, Impika was founded three years ago by a team with more than 18 years accumulated experience in industrial printing. Its 40 employees are engaged in looking at a wide range of applications for inkjet including digital printing, microelectronics and biotechnology.

At Ipex, Impika demonstrated a unit printing 4-color images and variable data onto ID cards and passports.

The Impika inkjet modules can be combined by GRE with any combination of unwind, laminating station, Digicut die cutter, laser die cutter and matrix/finished rewind. Additional converting options include sheet delivery, foil stamping, UV coating and curing, hologram deposition, RFID insertion and rotary die cutting with either fixed solid or flexible magnetic dies. GRE will also offer a retrofit service for R160s in the field.

'We view digital printing technology as a natural progression to our product range,' stated Jules Farkas of GRE Digital Solutions. 'With the growing demand for variable data printing and JIT delivery the benefits of partnering with a supplier of DoD digital print engines are obvious. The ability to offer monochrome, spot color and four color digital print capabilities on our converting platforms will enhance our product offering.'

In the wider packaging market, GRE already has an end user looking at a stand-alone 53mm-wide inkjet solution to print and apply tube labels on demand, in-house.

The Xaar inkjet heads mounted on the demonstration Impika UV inkjet rig

"Research is also ongoing into a wide range of jet-able liquids, including UV spot varnish, metallics, and conductive inks for RFID antennae and electronic circuits"

The third partner in the alliance is Chromos, which will acquire and manage the distribution channels. Interestingly, the Chromos Group already acts as the agent for Domino and Kodak Versamark's inkjet systems, which are aimed primarily at high volume coding and marking applications. The company also has the agency for HP Indigo and ABG's digital print and converting solutions, as well as a range of conventional press manufacturers including GiDue and Codimag.

The press conference launching the alliance was introduced by Juerg Weidemann, responsible for the Coding and Packaging division at Chromos. The company's Mario Fanton gave a presentation on inkjet sytems and applications, and Karl Fust, responsible for the printing systems division at Chromos, looked at the future of digital printing. He noted that Heidelberg in 2001 had predicted that full-color digital print would be growing at up to 18 per cent by 2010, with black and white digital growing at 11 per cent, flexo at six per cent and offset at just three per cent. Fust noted that each print process has its own strengths and weaknesses: 'For ultimate print quality offset is the winner, for color laydown flexo, for color strength screen, for maximum flexibility, combination printing, and for short runs, digital.'

Demonstration rig

L&L saw a demonstration inkjet rig at Chromos' headquarters building, located adjacent to Zurich airport. It incorporates Impika's C-9000 CMYK DoD UV inkjet modules printing text and graphics at 900dpi at speeds up to 24 m/minute.

The Impika inkjet modules use Xaar print heads, which image at up to eight grayscale levels – meaning that each drop of ink can be one of eight different sizes. Intermediate UV curing stations mounted between the color modules 'fix' the droplets on the substrate, which keeps the dots in alignment and helps maintain a tight registration. A conventional mercury UV lamp rated at 3-500W is mounted after the print units to provide the final cure. IST supplied the UV curing solutions.

An advantage of UV inkjet is its ability to key to a wide range of substrates without specific surface treatments, although some films will require corona treating.

Although the inks will not be proprietary, Impika will qualify third party inks, and this qualification will be tied to the warranty conditions. A wide range of inks will be available, both as CMYK sets and as pre-mixed solid colors, as well as specialist products like invisible inks. Although this particular press configuration uses UV inks, water-based or solvent solutions can also be configured depending upon the end use.

What of the future? Because Impika's inkjet modules are an 'open' system – the company supplies the inkjet base module and the software, but can add whichever heads it chooses – it can take advantage of future advances in inkjet head technology. Already, 16 greyscale level systems are hitting the market, and the next generation of systems could reach speed up to 48 meters/minute.

Research is also ongoing into a wide range of jet-able liquids, including UV spot varnish, metallics, and conductive inks for RFID antennae and electronic circuits. A new generation of nano-level inkjet inks is also under development, including highly-conductive nano-copper and nano-aluminum inks. ■

A bright future

Of all the digital technologies, inkjet is the most scaleable and open to new developments in speed, resolution, and in the development of new jet-able materials. Although the print resolution does not compare (today) to the top end HP Indigo and Xeikon digital print engines, there is a large swathe of shorter run, variable print applications waiting to be discovered in areas like logistics, product identification, and appropriately designed prime labels.

Black and white inkjet has long had a role in the high speed coding and marking of containers and in barcode and variable print labeling applications. Then at Labelexpo in the late 1990s we saw the installation of the single-color Argio inkjet head on an Aquaflex narrow web – a route taken today by Domino – with the first full-color Dotrix inkjet module appearing at Drupa 2000. Mark Andy installed this unit on its DT2200 hybrid flexo/inkjet press, but this never really took off despite very favourable reports from Stralfors, the first European user of the system. Stralfors – which also runs Xeikon and HP Indigo digital presses – told this author that 80 per cent of its new digital work goes onto the DT2200. Agfa continues to develop the stand-alone version of this 4-color inkjet module.

Recently there have been a spate of announcements about new players entering the narrow web inkjet market. Jetrion and Minolta, for example, have both announced new systems to be shown at Labelexpo Americas.

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Pushing boundaries in UV flexo

Can UV flexo white replace screen white? **Niklas Olsson**, global brand manager, Narrow Web Division, XSYS Print Solutions, believes the answer is 'yes – maybe!'

Almost like the search for the Holy Grail, printers have been seeking the ability to achieve the opacity and whiteness achieved in rotary screen printing, but using less-costly UV flexo technology. The aim with this article is to explain some fundamentals about the two technologies, to report on current research and developments, and on some of the new possibilities opened up by a recently-launched UV flexo ink from XSYS Print Solutions.

Opaque white UV inks in general

Opaque white inks are all made with the same pigment: titanium dioxide. It is a difficult pigment to handle in an ink, as it is heavy and 'hard'. While it may seem obvious that the opacity of an ink is in direct proportion to the percentage of pigment used, practical tests show, however, that this is not completely true. The correlation is not 100 per cent 'linear', because the phenomenon of saturation occurs at a certain level.

To formulate an opaque white UV ink is more complex than simply adding more or less opaque pigment. As it will be UV cured, the ink will require a certain amount of UV light to initiate the polymerisation (ie curing); and here the amount – and type – of titanium dioxide have a big impact. Firstly, as the ink is opaque, it naturally prevents the light from reaching the photo initiators, thus hindering the ink cure. By careful selection of the right TiO2 and photo initiator, it is possible to formulate fast-curing opaque inks which do not discolor – an important feature for opaque white UV inks that is often forgotten. Incorrectly formulated, they have a yellowish tone compared to the crisp white 'color' achieved with the correct formulation.

Controling the ink film weight

Another important factor is obviously the ink film weight applied. A similar correlation between ink and opacity applies: more ink may give more opacity, but will also reach a certain 'saturation' point where improvement is no longer linear.

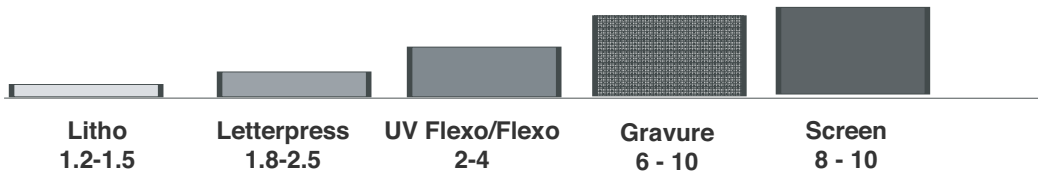
The ink film weights required on a substrate with the different print processes is roughly as illustrated below:

■ Required ink film weight in grams/sqm (microns)

■ Research within XSYS Print Solutions has found that the ink's ability to flow and form a homogeneous film on the substrate without air bubbles or pinholes is just as important for the final opacity of the print as the ink film weight and the percentage of pigment used.

This leads us to discuss the fundamental difference between, for example, UV flexo and UV rotary screen: it is, of course, the

Required ink film weight in grams/sqm (microns)



UV flexo (L) uses an engraved anilox roll to carry the ink up to the plate (with a raised image), and then the plate transfers the ink to the substrate. UV screen (R) uses a mesh. Capillary action transfers the ink direct to the web.

way that the ink is applied to the substrate. UV flexo uses an engraved anilox roll to carry the ink up to the plate (with an raised image), and then the plate transfers the ink to the substrate.

■ UV screen uses a mesh. Capillary action transfers the ink direct to the web.

■ Flexo

The engraving on the anilox dictates roughly how much ink will be applied to the substrate. It is not entirely true, but generally speaking there is a correlation between the theoretical ink volume held in the anilox and the thickness of engraving, and is a combination of the lines per cm, the angle of engraving, and the cell structure. It is, in fact, the volume that the total number of cells in the anilox can carry.

What is still an 'unknown' is how much of the theoretical volume of ink that the anilox can carry will be transferred to the plate after doctoring, and then later to the substrate. This 'transfer factor' is dependent both on ink formulation and on the anilox/cell configuration.

Accommodating an improved – thicker – ink layer required new engravings which gave a high cell volume > 20 cm3/m2 and a special cell structure. This, together with specially- developed viscosity and flow properties in the ink, enabled the transferable volume of ink to achieve the increased density/opacity.

XSYS research show that recent formulations in ink and anilox engravings have greatly improved the ink transfer factor – thus enabling higher ink film weights and the ability to provide solid areas and text at good commercial printability level.

Rotary screen

The ink deposit, and thus ink film weight in the rotary screen process depends on the screen mesh configuration. There are many different manufacturers of screen mesh types, and for our research we used in this case the system provided by Stork Screens as our reference. It measures the number of lines per cm in the mesh/screen, the thickness of the ink layer, and the percentage open area.

Again, the final deposit of ink on the substrate and the structure of the laydown (ie no pinholes) is dependent on both screen mesh configuration as well as on ink formulation. Recent challenges for ink makers are the more compact units being used (the so-called drop-in cassettes), with their smaller diameters, which create greater force on the ink which can in turn cause more air bubbles and even potentially foam in the ink. Imperative for a good screen white layer in, for example, "no-label look" designs is the ink's ability to cope with new challenges like this, while still enabling printers to maintain high printing speeds using easily- overprintable substrates. Printers who experience any such problems are welcome to contact XSYS Print Solutions, whose dedicated ink specialists can provide guidance on every application.

Printability

Can UV flexo replace UV screen? After reviewing the fundamentals of both processes in relation to laying down an opaque white ink, it is evident that there is considerable difficulty for a 'transfer' process which partly involves pressure to force the right ink amount over to the substrate.

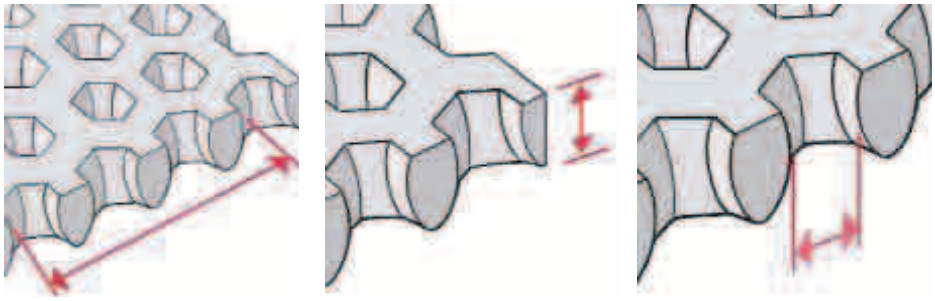
XSYS studies show that in solid areas it will be possible for UV flexo to match the opacity of rotary screen, but limitations will be evident in finer negative text, where rotary screen still has an 'edge'. Screen-printing can create sharper images at lower point sizes. Our internal tests demonstrated that for point sizes as low as 8 point, UV flexo is commercially acceptable for reversed-out text – which also is confirmed by customers using our technology commercially today.

A whiter shade of pale...how to measure it!

To measure the opacity of an ink we use a method called contrast ratio. This is a relative number, whereby a black density is measured through the layer of white ink. Total transparency will give the number 1, and total opacity will give the number 100.

In order to determine the opacity, we compared, for our initial feasibility tests, several types of anilox engravings from different

Lines/cm **Thickness** **Open area**



Pictures by kind permission by Stork X-Cell

manufacturers, all printing with the same UV flexo ink (at standard opacity). The results were as follows:

Ink	Screen/Anilox	Contrast ratio
UV Screen 1	305/13	86 -87 **BENCH MARK!**
Std UV Flexo	Anilox type 1	76 - 77
Std UV Flexo	Anilox type 2	75 - 76
Std UV Flexo	Anilox type 3	72 – 73

During this research, we discovered that it was not only the ink formulation which had an impact on the opacity, as previously mentioned. It is a much more complex 'cocktail' of factors. These are just some of the typical 'influencers' that our testing showed up:

In an ideal world, that ultimate Holy Grail combination that really gives perfect results certainly would exist. But our experience is that the factors mentioned above – and others – will vary from press to press. For example, the tape that might give good results with one plate and press may not be perfect with another plate and press.

It is, however, clear that there are two dominant factors for success in replacing UV screen with UV flexo:

1. the ink formulation
2. the choice of anilox roller

Ink formulation	**Anilox type**	**Doctor blade**
Pigment type Content Flow / viscosity	Cell configuration Cell volume Manufacturer	Pressure Angle Thickness Stiffness
Tape	**Plate**	**Printing Press**
Compressibility Thickness	Type Shore hardness Thickness	Operator Condition

Ink	Screen/Anilox	Contrast ratio
UV screen		86 – 87
Std UV flexo white, conventional anilox		72 – 76
Water-based flexo white, conventional anilox		65 – 70
Flexocure Ivory, conventional anilox		80 – 82

By comparing a variety of all the parameters, we were able to balance them and achieve the optimal configurations. These are the contrast ratios we have been able to achieve:

Combining the right ink, anilox, tape and plate with an appropriate press it is therefore possible to obtain similar opacity and flow-out in solid areas with UV flexo as with UV screen.

Conclusion

As achieving this result is definitely a combined effort, depending not just on one parameter, engineering and fine-tuning results can be complicated. The good news, however, is that by using newly-formulated UV flexo inks like our Flexocure Ivory, a printer may start by simply using his 'standard' settings, and the new ink will still deliver better results than standard UV flexo inks. But to achieve optimal performance with these new inks, we recommend taking advice from your ink manufacturer on choosing the right combination of parameters for your press. We believe the results we have achieved with Flexocure Ivory are impressive, and unique in the industry. Flexocure Ivory makes it possible for printers to create an opaque white print with UV flexo for subsequent overprinting by any of the available print processes without the need for a UV screen unit, and achieve a good result at a significantly lower cost. ■

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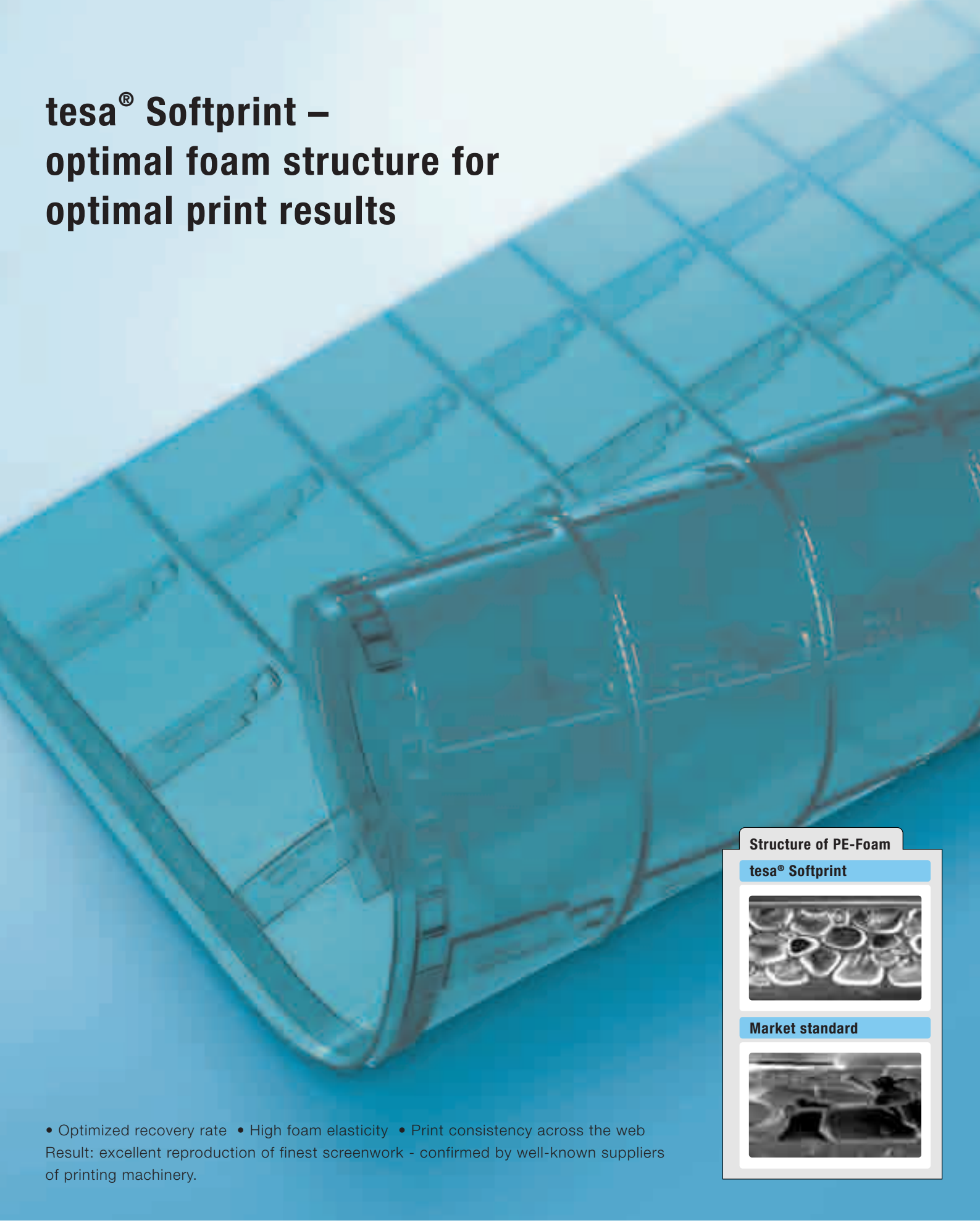

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Cutting impressions marking the backing material can have many causes. To avoid problems in subsequent processes such as dispensing the labels, die cut specialist **wink** recommends practical measures to prevent this happening

Monitoring the gap

When adhesive labels on the roll are cut, the adjustment of the optimum cutting depth makes special demands on the operating personnel. If the cutting edge does not penetrate deeply enough into the composite material, the face material will not be cut and the waste matrix cannot be stripped off. If this occurs, the operator increases the cutting force until the waste can be stripped off without difficulty. One of the most frequent problems in cutting is the excessive penetration of the cutting edge into the adhesive composite and this can cause marks and cutting impressions in the backing material. The consequences of this and how the resulting problems can be solved are described in this article.

Figure 1 (overleaf) schematically depicts a typical adhesive composite, consisting of the face material, adhesive, silicone coat and the backing material. Of the four indicated cutting depths, variant 1 is the optimum. The cutting edge penetrates just sufficiently to cut through the label web with the adhesive coating, but leaves the silicone-coated backing material undamaged. In contrast, variants 2 to 4 show examples of cutting with excessively deep penetration and this can cause the adhesive to flow through the silicone layer to the backing material as shown in variant 4. If the adhesive bonds with the fibers of the backing paper, this will have a negative effect on the subsequent processes e.g. the labels may adhere to the backing material and prevent correct dispensing. Furthermore heavy marks in the backing material can also cause the backing material web to tear during the dispensing process.

> "One of the most frequent problems in cutting is the excessive penetration of the cutting edge into the adhesive composite"

Practical solutions

A series of cutting problems, which occur again and again in everyday production, are described below. Apart from indications of the possible causes, ideas for solutions are also included. Whatever the situation it should be ensured that the correct pressure is set and that the pressure is evenly distributed. This can be confirmed by using pressure cells and wink Stanzwerkzeuge GmbH & Co. KG offers suitable products in this respect. It should also be ensured that the matching anvil cylinder is fitted in the cutting machine. In practise, it is sometimes found that the cutting tool is 'accidentally' fitted with a positive or negative anvil cylinder.

Practical experience also shows that faultfinding should not necessarily begin with the worst case (e.g. damage to the machine or bearings). Often, apparently small causes such as dirt prevent optimum cutting results. The list of practical hints below on how to rectify specific cutting problems in the production of labels begins with such an example.

- **Cutting plate sporadically cuts too strongly**. The cause

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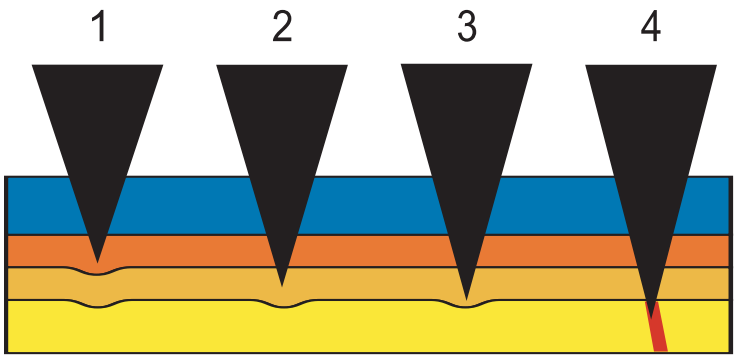
Figure 1: The different penetration depths of the cutting blade into the various layers of an adhesive composite (from the top downwards: label material, adhesive, silicone layer, backing material)



1 till silicone layer
2 slight in silicone layer
3 through silicone layer - not good
4 glue penetrates the silicone layer and flows in the substrate

"If the fault changes place after the cutting plate has been rotated, the cause is probably residues of adhesive or ink under the cutting plate or damage to the cutting tool"

of this may be dirt on the surfaces of the cylinder and turning the cutting plate through 180 degrees as a test can easily check this. If the cutting faults continue to occur at the same places, residues of adhesive or ink may be on the surface of the cylinder.

However, if the fault changes place after the cutting plate has been rotated, the cause is probably residues of adhesive or ink under the cutting plate or damage to the cutting tool. In this case, the operating personnel should clean the rear of the cutting plate and inspect the cutting samples which are sent together with the cutting plate. If the problem persists, the tolerances of the backing material should be examined.

■ **Cutting plate cuts differently at the left and right side**. Turning the cutting plate through 180 degrees, which is generally an effective method for localizing faults, can also supply valuable clues to the cause in this case. Whenever the problem changes place, the fault can generally be found in the plate. The cutting sample should then be examined and if this is not in order, it is advisable to contact the manufacturer.

If the fault does not change place after the cutting plate has been rotated, it is possible that something is wrong on the machine. An examination of the gap then provides more information. A simple method is described below in this article to permit the user to examine the gap.

The play of the bearings and bearing blocks should also be examined. Apart from faulty cutting tools and cutting units, an uneven thickness profile of the backing web can also be responsible for this specific cutting problem. Whether this is the case can be determined by measuring the backing web with a micrometer.

■ **Cutting is too deep**. If this problem occurs, the cutting sample should firstly be examined. If the problem cannot be found in the cutting sample, the thickness of the backing material should be examined with a micrometer and compared with the order specifications for the cutting plate.

It is also possible that the gap is incorrect, i.e. it may be too small, or the cutting plate is manufactured too high in relation to the gap and the backing material. However, worn out bearers or a worn anvil cylinder may also be the cause. In this case, it is also advisable to examine the gap.

■ **Longitudinal cutting lines are too heavy**. In this case the cutting sample should also be examined initially. If this is in order, the gap may be too small and if this is the case the following symptom can be also be seen: Due to the small gap, the longitudinal cutting lines will mark even at a low pressure (e.g. 150 psi) on the backing. When the transverse cutting lines then penetrate the material to be cut, the pressure increases sharply and this raises the magnetic cylinder from the anvil cylinder because it was not possible to set the pressure sufficiently high. This occurs mainly with a high proportion of transverse cutting lines. In this case also, it is advisable to measure the gap.

It is also possible that the magnetic cylinder is not sufficiently proportioned to withstand a

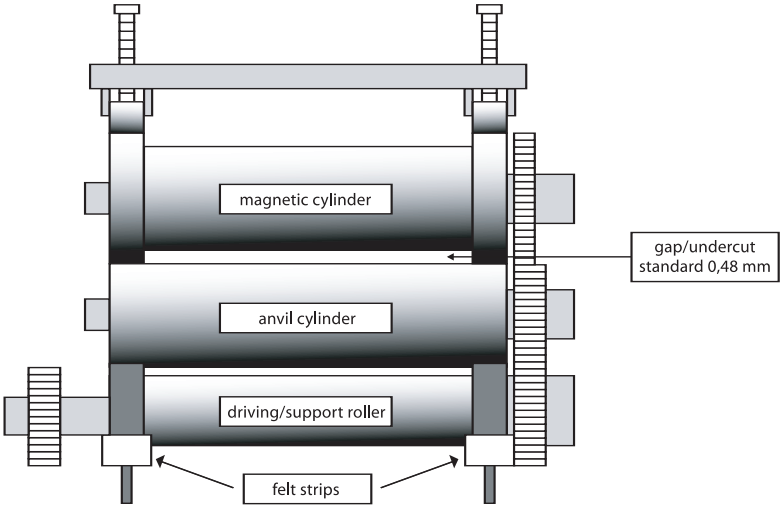
"If an unsuitable cutting angle is used, too much pressure must be applied to the face material during cutting to achieve the required result"

high ratio of transverse cutting lines. This can also cause the longitudinal cutting lines to cut too heavily. Choosing a larger magnetic cylinder can rectify this.

■ **Cutting pattern more and less pronounced in the web direction.** In order to exclude fluctuations in the thickness of the backing web as the cause, the thickness of the face/covering material should be examined using a micrometer. If this is not the cause of the fault, mark the more or less pronounced cutting lines on the cutting plate and then turn the plate around. If the fault changes position consistently with the change in the position of the cutting plate, it is possible that dirt particles are under the plate and to resolve this, the cutting plate should be thoroughly cleaned. It is also possible that the cutting plate has been made unevenly. This can be seen in the cutting sample.

However, if the fault does not change position when the cutting plate is turned around, the anvil cylinder or the magnetic cylinder may have dirty or marked points and in this case, the cylinders must be thoroughly cleaned. If the problem persists, it is also conceivable that the cylinders are

Figure 2: The gap is the distance between the magnetic cylinder and the anvil cylinder as depicted in the diagram



running out of true for various reasons.
A different cutting plate should be used as a test. If the problem still persists, the cylinders must be refurbished or replaced. The service staff from wink will assist in this.

■ **Cutting pattern becomes less pronounced towards the middle**. Whatever the case, the backing material and a cutting sample should firstly be examined. In systems both with and without supported anvil cylinders, sagging can occur if the ratio of the cylinder width to the circumference of 1:1 is significantly exceeded. The problem occurs more frequently when transverse lines are cut. A test with a larger magnetic cylinder can supply more detailed information. If this confirms the suspicion, the problem lies in the design and cannot be rectified by the operator because the cutting unit is inadequately proportioned. A change to a larger circumference (i.e. using a larger magnetic cylinder) may be helpful for such applications.

■ **Excessive marking by a flat cutting edge in relation to the printed material.** If an unsuitable cutting angle is used, too much pressure must be applied to the face material during cutting to achieve the required result. This damages the backing material and inadequate cutting will result. This problem can be avoided by conducting cutting tests with different cutting angles and cutting line heights in the wink laboratory. This permits the cutting tool to be optimally adapted to the face material.

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"It is therefore important for users in the label business to know what the term 'gap' actually means and how it can be measured"

The gap

As shown by the list of different problems, which can occur during cutting, several are caused by an incorrect gap. It is therefore important for users in the label business to know what the term 'gap' actually means and how it can be measured. See figure 2 on previous page.

Stated simply, the gap is the space between the magnetic cylinder (magnetic area) and the anvil cylinder. This space receives the cutting plate and the printed material web during cutting. In narrow-web printing machines, the gap is usually 0.48mm. This is composed of the thickness of the backing material and the height of the cutting plate, which varies according to the thickness of the backing.

The gap changes due to abrasion or wear to the bearers and/or changes in other components such as the magnetic cylinder and the anvil cylinder. In the worst case, this change can be so severe that good cutting results can no longer be achieved. The individual components should therefore be inspected annually. The service staff from wink should conduct the measurement.

However, printing shops may proceed to solve problems at short notice as follows:

- To measure the gap, the material web and the cutting plate must firstly be removed.
- Clean the surfaces of the magnetic cylinder and the anvil cylinder thoroughly.
- It is an important prerequisite to set an even, 'normal' pressure of approx. 300psi at both the operator's and the drive sides. This setting can be simply adjusted using pressure cells, which are available from wink.
- Cut three lengths of approx. 40cm each from a roll of flux-free solder.
- Allow one of the three lengths to pass twice through the middle of the working width between the magnetic cylinder and the anvil cylinder. Particular care must be taken because the inlet point is a point of potential trapping and injury. Be very careful.
- Execute the same procedure with the remaining two lengths of solder at the drive side and the operator's side. The distance from the bearers should be approx. 5cm.
- Measure the three lengths at five different points with a micrometer and record the results of the measurements.
- Evaluate the measurement results. If deviations from the standard gap (0.48mm) are found, which are outside the tolerance limits, consult a cutter manufacturer. The application technicians at wink are available at all times.

In the evaluation and analysis it should be ensured that no excessive deviations from the standard gap of 0.48mm exist. The measurements should be in a range from 0.478mm to 0.482mm.

If the gap is smaller than 0.4mm (e.g. 0.471mm), problems will occur during cutting, such as too pronounced marking at low pressure. The cause may be worn out bearers or a worn anvil cylinder.

If the gap is larger than 0.48mm (e.g. 0.486mm), the distance between the cylinders is too large, the outcome is inadequate cutting results and to achieve improved cutting a very high pressure (e.g. 800psi) will be required. This should be avoided under all circumstances as this exerts very high loads on the bearers and bearings and the service lives of the cutting plates are significantly shortened.

Uneven measurement results along each length of solder indicate that the cylinders are running out of true. On the basis of the measured values, faults and cutting problems with specific combinations of cylinders can be identified. For example, a frequently occurring problem is a gap too small at the drive side whilst the gap at the operator's side is too large.

Several prerequisites in the design are necessary to achieve high-quality cutting results:

- Force transmission by a traverse held in ball bearings
- Adequate proportioning of the cylinders
- Cutting unit equipped with drive and supporting rollers

Also, the operating personnel should also embrace several fundamental rules. Pressure cells should be used to check that work is always conducted with sufficient, but not excessive pressure. Adequate lubrication of the system with undamaged and carefully cleaned cylinder surfaces at all times. Not least it should be verified regularly that the gap complies with the specified value of 0.48mm. ■

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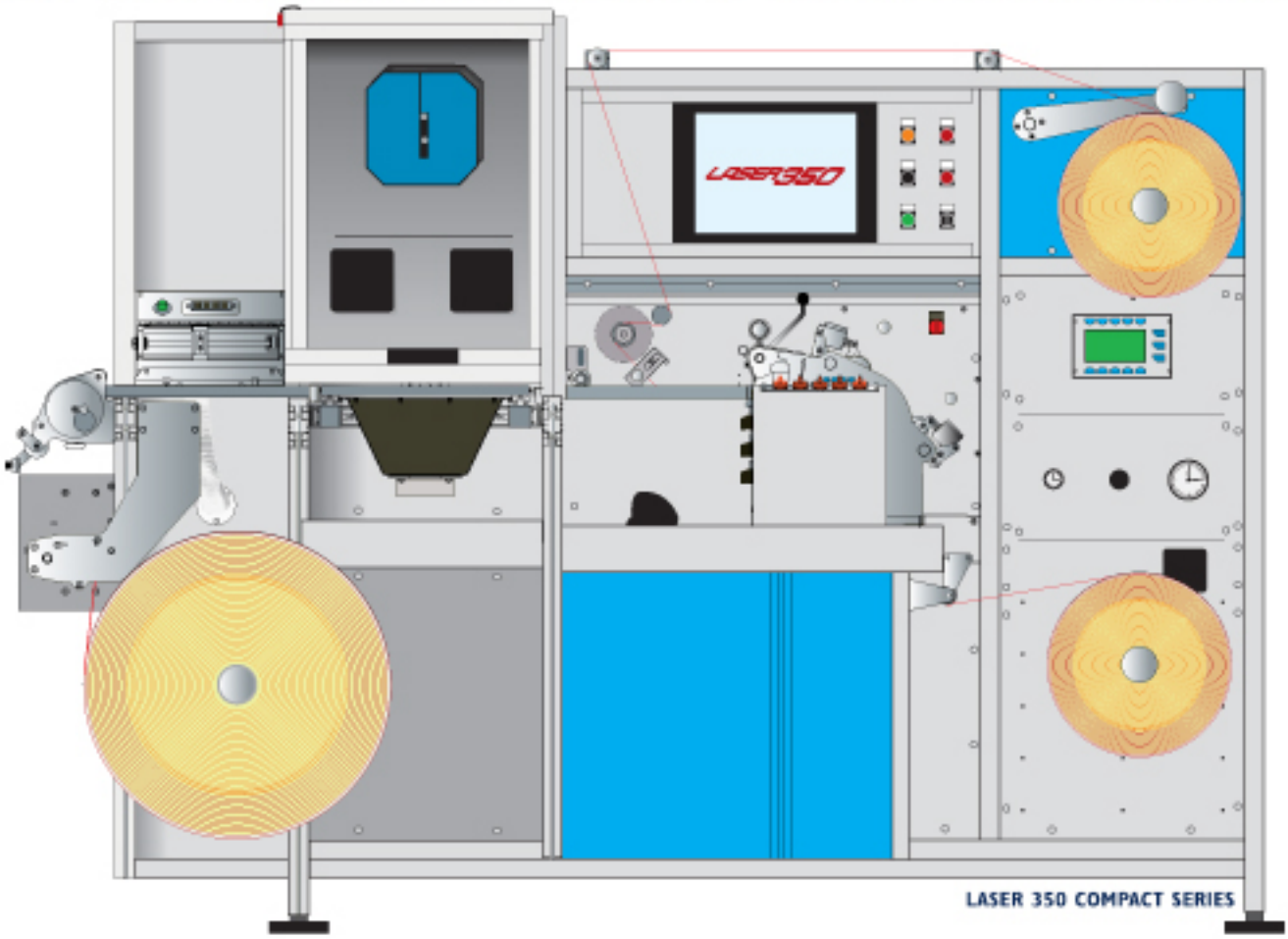

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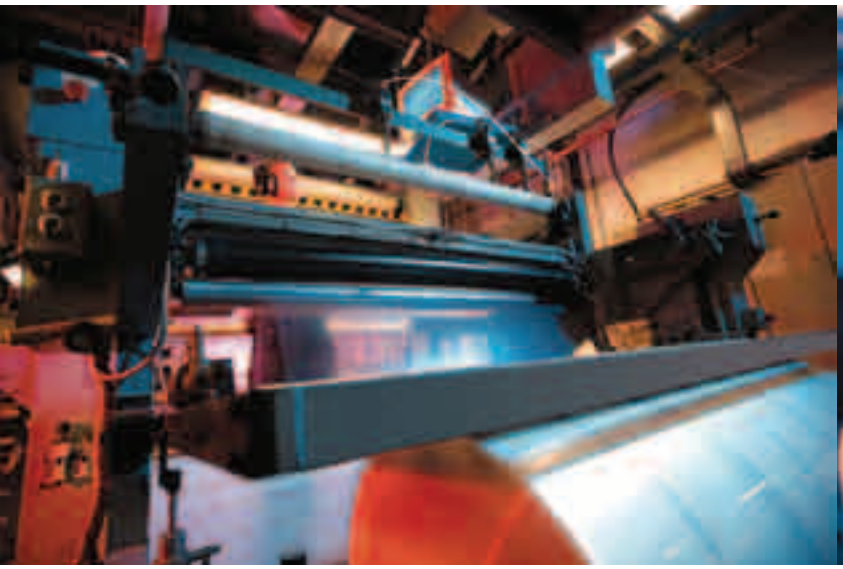

Escape commoditization through innovation

Ernie Dellow, UK sales manager, Bespoke Laminate Solutions, Tenza Technologies says UK converters can still run a profitable business, despite the current problems with the self-adhesive label market

According to the most recent statistics from FINAT, the international industry association for self-adhesive label converters and suppliers, the UK label market was static in the first half of 2005, following growth of 3.1 per cent in 2004. While we are awaiting the second-half performance, my conversations with customers and colleagues don't suggest a big recovery. With some exceptions, the majority of label converters experienced falls in demand, or declining profitability, or both; and, as some businesses struggled to remain viable, the year saw further consolidation in the quest for scale and efficiency.

There are numerous reasons for these challenging trading conditions. Some are shared by industry and business across the board: for example, the rising costs of raw materials and – especially over the winter of 2005-06 – of energy; and new competition in economically developing regions such as Eastern Europe.

Other reasons are more particular to the converting sector. At every stage of the supply chain, from brand-owner and retailer backwards, the mantra seems to be 'squeeze out cost', which adds to the pressure on the margins of small to medium converters exerted by larger players. Then there is the growing interest and investment in new technologies such as 'smart' RFID labels, which adds to the uncertainty. Finally, the nearer the environment gets to the top of the political agenda, the sharper retailers and consumers focus on the packaging and labeling sectors.

So with this intimidating combination of economic, geopolitical and technological developments impacting on the label converting business, it's no surprise if we feel a bit down now and then! However, look deeper and the gloom starts to lift, revealing new opportunities for converters willing to, firstly, change the way they think about their business and, secondly, exploit the growing demand for innovative labeling solutions.

Take the Eastern European markets, for example. In 2004 the self-adhesive labeling market grew by 19 per cent – so fast that the 'native' converters couldn't keep up with demand. As a result, a number of quick-thinking and nimble UK converters were able to step in and pick up new business. In addition, the increasing consumerism in these rapidly developing markets is generating demand for more specialized, more innovative labels – products of which the established UK converters have experience, and in which they excel. The results are competitive advantage and new export opportunities.

Furthermore, increased government regulation of sectors such as pharmaceuticals and food itself generates demand for innovative packaging and labeling. This, after all, is one of the drivers behind RFID and other 'smart' labeling technologies.

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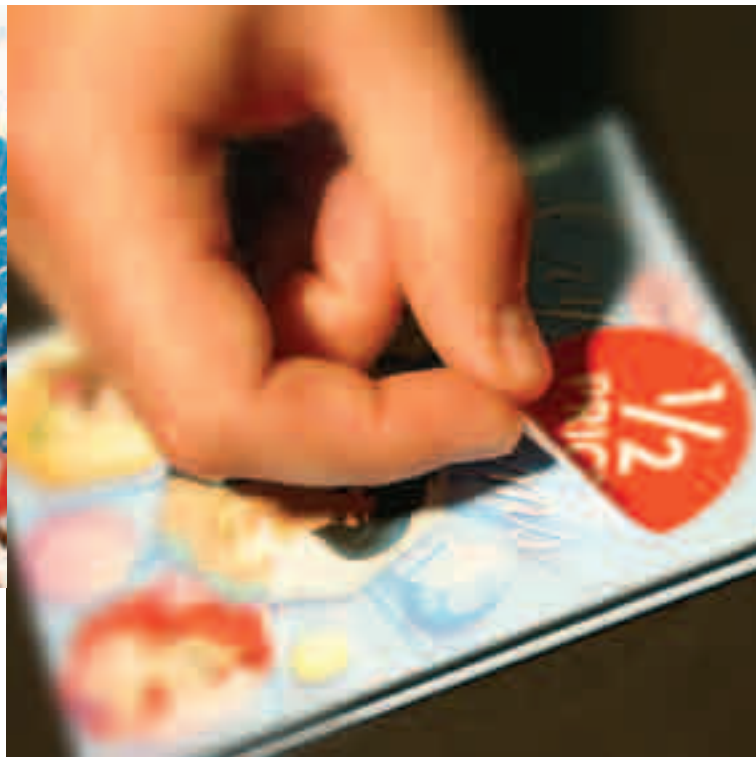

New mindset

So there are opportunities out there; the trick is to identify and exploit them, and this calls for a new mindset, a new way of thinking about what you do. It means not just looking at the business, but around and ahead of it. It means adopting a pro-active approach and, in particular, understanding three things – where converting sits in the newly emerging landscape, what's changing now, and what's likely to change in the future.

Attitudes towards RFID provide a good test of whether or not a business is doing this. Some see RFID as a threat, while others see it as an exciting opportunity to take a hand in what may be a packaging revolution. After all, they say, label converters already have a wealth of experience in product identification, so it's logical that they participate in the evolution of new trends.

There's a parallel to be drawn with the prepress industry, which was the first sector of the printing industry to feel the impact of the digital revolution. While some color reproduction houses ignored what was happening at first, and then tried to adapt too late, others looked ahead and realized that the future provided opportunities for companies that could store and process the huge volumes of digital data that the revolution created. Many of those businesses are still around, and thriving. A similar scenario may play out around RFID. While the key issue is when and how to enter the market, you can't do this without understanding the technology and its potential.

RFID, of course, is a startlingly new market, and its real extent and nature are still emerging. But simply by assessing its potential for your business, you are acknowledging the need to look ahead and adapt.

The commoditization trap

Whether you explore RFID or some other technology or market, you are also recognizing how vital it is to differentiate your offering from your competitors'. While investing in new production equipment could help to make you more efficient and keep you competitive, to increase your margins you have to escape the commoditization trap. You have to specialize.

At Tenza, we're seeing encouraging signs that more and more converters are increasing their R&D efforts. Sometimes it's from a standing start, but the important thing is, they've started. Despite the overall sluggishness of the UK market, in 2005 we recorded sustained growth in demand for our bespoke laminates virtually across the board. Our sales force and the technical team backing them up report increased enquiries from existing and potential customers about combinations of laminates and adhesives, and, often, approaches from converters who are working closely with their clients on new products.

Partnership and innovation have to be the way to survive and prosper, and I recently came across some US research that bears this out. Conducted by specialist research company LPC Inc, it also offers hope for converters and packagers who feel they are slowly being strangled by major customers' ceaseless pressure on margins – in particular, through the mechanism of enforced price reductions.

At the start of this year, LPC spoke to both sides of the negotiation on label costs – CPG (consumer packaged goods) procurement departments and the converters – about the levels of such reductions actually imposed in 2005, and those anticipated for 2006. What LPC found was that while converters had to accept cuts of between one and 10 per cent last year, over half of the CPG procurement teams expected they would be paying more for their labels this year.

The reason? Because they acknowledged how important innovation was – for them and their suppliers. As one respondent said: 'Our packaging suppliers have to be able to invest back into their businesses. We continuously depend on the high levels of innovation that come from our vendors.'

Now this research was conducted in the US, not the UK, but globalized procurement increasingly makes such distinctions less important, and such reasoning should be music to the ears of forward-thinking converters everywhere. While it presupposes co-operative relationships between converter and customer, building such partnerships will be the foundation of future success. There really is no alternative. ■

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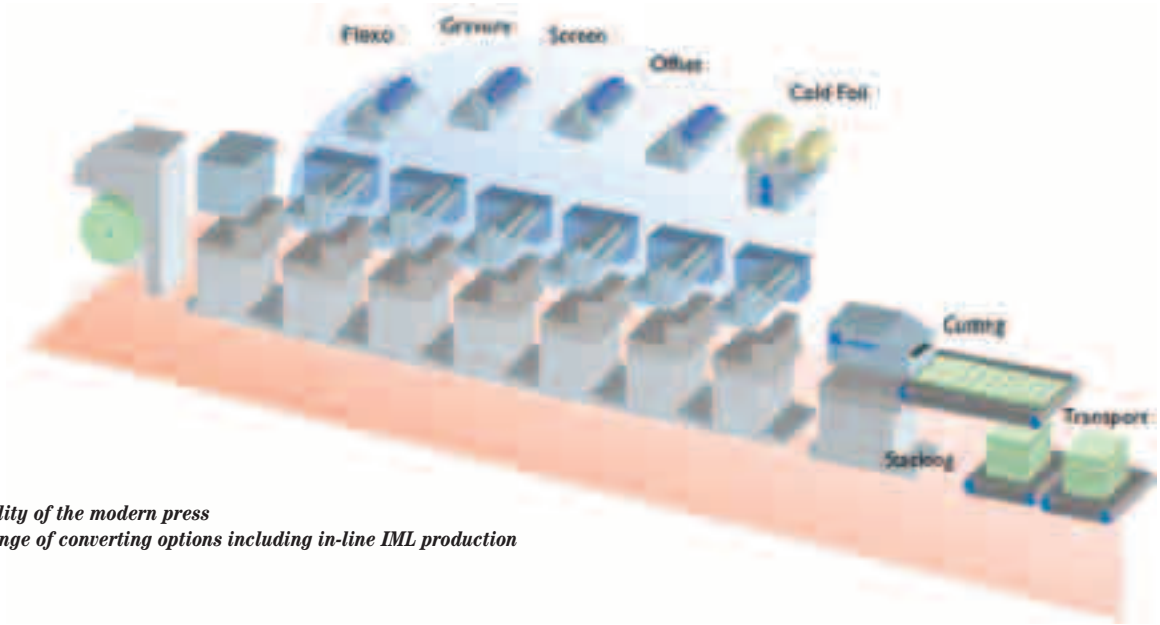
What is changing in the world of UV?

This was the theme of a paper presented by Kim-Regin Sustmann, manager of Nilpeter's Asia Pacific division, at the recent Label Summit held in Tokyo. This edited version by **Barry Hunt** is aimed at those new to the process

First the commercial. Nilpeter's involvement with flexo began in the 1960s with machines for producing adhesive tapes using solvent-based inks. Flexo presses for producing pressure-sensitive labels followed in the early 1970s, at a time when full or semi-rotary letterpress dominated the European label printing scene. Nilpeter's first modular flexo rotary press, the F200, appeared in 1977. Later models incorporated water-based flexo ink technology, which began to overtake solvent inks around the mid 1980s. Although arriving on the narrow-web scene in 1988, UV flexo was not widely accepted among label converters until the mid-1990s. The first UV flexo presses fitted with servo-drive technology appeared in 2000, when the printing of unsupported films began to gain ground. Five years later sleeve plates made from lightweight materials arrived.

As Kim Sustmann explained, major brand owners are influencing trends in label production. They are concerned to build up the brand identity of individual products within the context of a single global quality. This presents various challenges to label and packaging producers, not least in achieving greater flexibility during the various printing and finishing processes. Fortunately, the development of the combination press by manufacturers, based on a platform structure, has allowed converters to mix and match processes and create flexible press configurations. For example, a press configured solely for pressure-sensitive labels would have UV or conventional flexo, rotary UV letterpress or offset as the main process color printing units. Various decorative effects are achieved by adding one or more screen process modules, hot/cold foiling modules or even a rotary gravure module to achieve bronzing or heavily opaque effects, completed by one or more die cutting unit and waste rewind units. Some presses allow reverse-side printing of a laminated web in conjunction with a moveable turner bar, a delaminator to remove the facestock from the release liner and a relaminator to reapply it



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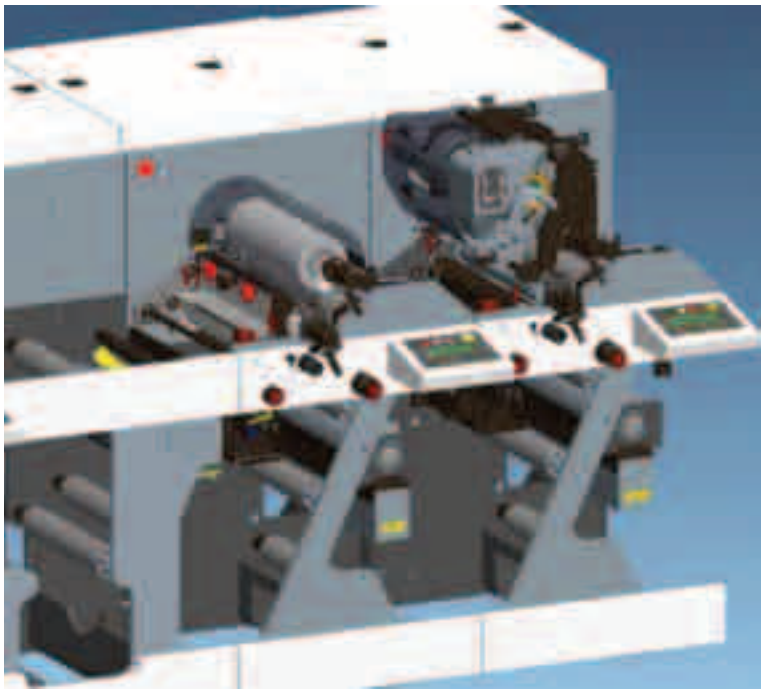
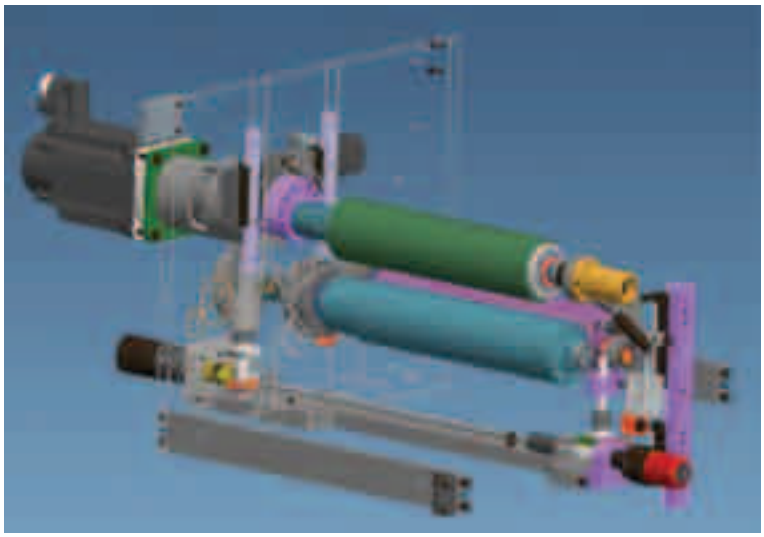


The development of drop-in-screen technology allows easy insertion of rotary screen at any print station



Direct drive servo units are most commonly used for web tension control and independent control of plate cylinder rotation

after printing.

Using the same choice of full-color processes, a similar principle could apply to the combination press intended for roll-to-roll film products, such as shrink sleeves and wrap-around labels. Handling the various types of unsupported packaging calls for such items as antistatic bars, carefully controlled web tension systems with idler rollers, as well as a corona film surface treater, and a web cleaner. Other combination presses could incorporate an in-line or wheel-up cutter/sheeter with delivery belt and stacker to produce wet-glue labels or in-mold labels. A multi-substrate press configured to produce small folding cartons could include all of the above processes, augmented with optional ink jet coding units, embossers, laminators and laser die cutting. Security printing applications could include customized inserters to apply RFID tags and/or holograms, while running special types of overt or covert security inks.

Matching the rise of combination press technology and multi-substrate production is a corresponding increase in web widths. These have advanced from 250mm to 330mm, while widths of 420mm and 520mm are becoming commonplace. Now 'mid-web' presses of 620mm and upwards are appearing. All of these trends underline the unrivalled flexibility of narrow-web technology in terms of types of materials and finished products. So besides producing filmic and paper labelstocks, these presses can include film packaging, sheeted products, tube laminates, in-mold labels, small folding cartons, tags/tickets, aluminum lids and blister packaging. As Sustmann reminded his audience:

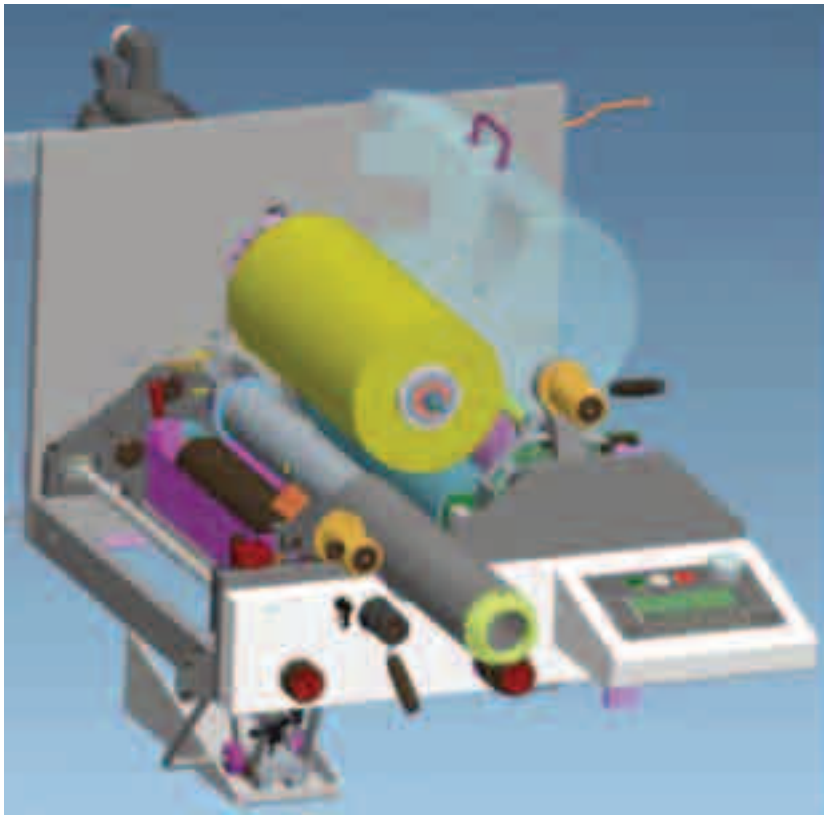
'Competition is not only about price if you can do something your competitors cannot do.'

The development of UV flexo

A graphic depicting narrow web press sales in Europe showed that UV flexo's share of this market has increased from 11 per cent in 1994 to 49 per cent in 2004. It is expected to reach 57 per cent by 2010. Conventional flexo would have fallen to 20 per cent by this time, while – as in 1998 – offset's share will remain at around 13 per cent. No breakthrough is expected for digital color printing: by 2010 press sales will have stuck at only eight per cent.

A major reason for UV flexo's growth is that it delivers the high quality results that label buyers expect. 'UV flexo offers a standard of print quality that is equal to, or better than, that achieved with rotary UV letterpress print', said Sustmann, adding that UV flexo was close to the quality normally expected for UV offset. It was also possible to achieve a 'screen process' look. Compared to UV rotary letterpress, UV flexo offers productivity improvements of 30-35 per cent, but at a 20-35 per cent lower cost. From ink formulation point of view, there was very little difference. The ingredients are similar, but UV flexo inks are much thinner and have a lower viscosity, allowing the application of more ink to the substrate compared with letterpress. The printability of UV flexo inks is the same, or better, but advantages include very low dot gain, no ghosting and much higher gloss levels. With metallic inks the printed result is much brighter.

With conventional flexo, the image is transferred to the substrate by a photopolymer relief plate, usually with a thickness of 1.70 mm. The newer type of flexo plates are thinner at 1.14mm and are increasingly digitally imaged on computer-to-flexo-plate platesetters. On the press, UV inks offer more stability in the inking system and make for easier and faster ink



Anilox sleeves are migrating from wide web to narrow/mid web presses due to ease of handling

changes. Copper- engraved or ceramic-coated, laser-engraved anilox rolls for use on UV flexo presses can be selected for specific types of printing and substrates. Those with high line screen counts have contributed significantly to achieving high levels of color consistency.

As to the subject of electronic servo drives for narrow-web presses, Sustmann referred to the problem of gearwheel marking that sometimes occurs during flexo printing. The use of gear wheels in print cylinders also limited the range of repeat sizes and type of printable materials. The answer, he said, was to adopt integrated servo technology which was based on the direct drive principle: the servo motor was linked directly to the plate cylinder and avoided the need for intermediate gearing. He said it was possible to have up to a million individual positions on the full revolution, representing the highest level of self-adjusting automation, but cautioned: 'If one servo motor can cause a problem, then 100 servo motors can give 100 potential problems.' The places where separate servo drives are desirable include the web infeed, printing cylinders, die cutting section and rewinder. The anilox rolls and inking system, impression cylinders, chill rolls and rewinder are best linked together with a central drive, or run 'free floating'.

The trends towards incorporating servo-drives on UV flexo presses had encouraged the parallel development of sleeve technology for both the printing medium and anilox rolls. In both cases, the lightweight sleeves fit securely over a mandrel in the print cylinder or anilox cylinder. They are changed without requiring tools, are easy to handle and store for reuse. Printing sleeves run in conjunction with steel impression rollers that eliminates dot gain at any press speed. The web-driven rollers run with a constant diameter and are not effected by heat or changes in web width.

Sustmann described some of features on modern servo-driven UV flexo presses that help users achieve high levels of productivity. These included job management systems,

"The trends towards incorporating servo-drives on UV flexo presses had encouraged the parallel development of sleeve technology for both the printing medium and anilox rolls"

automatic register control and automatic print adjustment on the press. Menu-based master controls helped to reduce set-up time and waste, giving all input possibilities including saving job data. He explained the significance of using presses with short web paths. Besides accessibility and print visibility, the costs benefits could be considerable. For example, an eight-color press with a relatively short web path of 30 linear meters would require three square meters less of material compared with a press with a web path of 39 linear meters.

Using the three square meters example, Sustmann concluded by offering the following calculation: if a press had an average of 25 stops per eight-hour shift, this would equate to 75 square meters per shift, or 150 square meters on a typical double-shift day. Over a five-day week this totalled 750 square meters and over 47 weeks in a typical year it amounted to 35,250 square meters. If the material price was approximately one euro per square meter (US$1.25) the extra material cost would be Euro 35,250 (US$44,302) or Euro 176,250 (US$221,511) over a five-year period. ■

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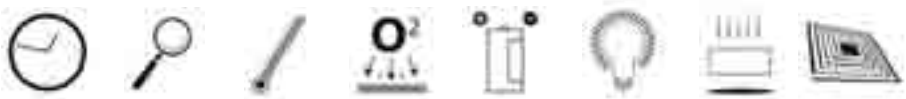

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UV curing has become a cool business

Mike Fairley visits IST Metz in Germany to assess how new developments in UV curing technology are bringing significant benefits to label converters

While UV curing technology has been used by the label industry since at least the 1970s it has nevertheless undergone significant changes in recent years to become far more energy efficient, much cooler and considerably more cost-effective than ever before. Indeed, well over 80 per cent of all new UV systems supplied to the major OEM press manufacturers for fitting to the latest presses being shipped are today highly efficient, cooler, systems that offer major energy saving and performance benefits to the converter.

For IST Metz, one of the world leaders in UV systems and lamp design, recent UV system development has been

"UV systems today are highly efficient, cooler systems that offer major energy saving and performance benefits to the converter"

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concentrated on a number of key innovative product developments as part of a new lamp module design, including new reflector technology, advanced electronic power supply units and fast change lamps – all of which have lead to a notable reduction in operating costs, and therefore to more cost effective production for a comparatively low investment.

The new lamp module, called the MBS-5, is claimed to bring up to 40 per cent more UV energy onto the substrate surface through a combination of new solutions all focused on making the most economical use of energy in the overall design – in turn enabling label converters to change over to lower power consumption UV lamps without affecting curing performance, productivity or print quality.

Just one of the innovative product developments within the new lamp module, the URS so-called cold mirror reflector technology, is designed to increase significantly the efficiency of UV curing. In fact, around 20 per cent more UV energy reaches the substrate for the same electrical output when compared to conventional lamp reflectors. The result is an increase in production performance and a reduction in energy consumption.

What makes this technology impressive is that the new reflectors combine the advantages of the well-established aluminum and CMK (cold mirror) reflectors so that only the UV energy is reflected – whilst the IR energy (unwanted heat) passes through the reflector coating into an air-cooled profile where the heat is then efficiently removed.

Extensive trials with the new reflector technology have shown that it is possible to achieve production curing speeds with 140 W/cm output lamps that were previously only possible with 200 W/cm lamps. This offers both energy savings and more effective heat management (up to 20 degrees lower on the web) – particularly important for temperature-sensitive filmic substrates.

An additional advantage of the URS reflector technology is that the reflector geometry can be adapted to meet the exact requirements of specific production processes. This means that it is possible to order and use specific reflector coatings for different UV curing applications.

Also providing increased energy efficiency with the new lamp module is the latest electronic lamp control (ELC) equipment introduced by IST Metz. Specially designed to operate UV lamps, the ELC range of electronic control equipment guarantees a consistent lamp output, even if the network voltage varies by +/-10 per cent. The equipment also has a high electrical efficiency of up to 97 per cent, which leads to reduced operating costs – and to further savings of 20 per cent to 30 per cent when the UV system is in stand-by mode.

The compact design of the ELC equipment additionally reduces the space required for the control cabinet and the weight of the cabinet by up to 50 per cent, with plug-in connections that ensure easy installation of the equipment.

> "What converters are increasingly coming to appreciate is that the optimum curing level is not achieved with the highest lamp power, but by the most energy efficient"

A further benefit of the MBS-5 unit is that it uses the cable-free FLC (Fast Lamp Change) lamp system which enables lamps to be changed quickly (in around 30 seconds) and easily when required. Using this quick change system the whole press production line can be operating again in just a few minutes, so minimizing press downtime.

The MBS-5 system also produces less exhaust air, which results in a considerable cost saving for air conditioning in the press room. A side effect of this is that the lamp and reflector attract less dirt, therefore reducing downtime for cleaning. Such measures increase the availability of the machine and have a considerable potential to further reduce operating costs.

Should any converter by now be thinking that the new lamp system sounds expensive they can be reassured; the purchase costs of the MBS-5 system are comparably low, thanks to new production facilities which IST Metz has set up at its site in Nürtingen for special product segments such as narrow web printing. What's more, research, testing and trials have shown that a converter can save up to 8,600 a year in energy costs when using these more energy efficient and cooler systems.

'What converters are increasingly coming to appreciate,' expains Joachim Jung, chairman of IST Metz, 'is that the optimum curing level is not achieved with the highest (and more expensive) lamp power, but by using the most energy efficient system – with less input power to the lamp – that will enable the ink to cure. The aim therefore is to have the maximum UV cure, but at the lowest possible cost.

'Other factors that the converter needs to consider are to select a lamp system that uses reduced lamp output when it is in a stand-by mode, to look at lamp changeover time and at how quick and easy it is to check lamp output – all factors that we have built into our UV technology for the benfit of

IST Metz claims that the MBS-5 brings up to 40 per cent more UV energy onto the substrate surface

"Converters should ask what the power supply is, what the reflector quality is, how is heat in the system managed and how is it integrated on press?"

converters.

'Quite simply, converters buying or installing UV curing systems today should be asking the supplier what the power supply is, what the reflector quality is, how is heat in the system managed and how is the equipment integrated into the press so as to achieving quality performance and control of the printed product. Also does the supplier provide training and consultancy about UV curing technology, anti-static requirements, about blanket and roller considerations and on the health and safety issues of UV technology.'

Certainly for IST Metz, who are one of the world leaders in developing, manufacturing and marketing systems for curing and drying solvent-free inks, varnishes and silicons in an environmentally friendly process, their success in addressing all the above factors over the past couple of years has ensured further expansion and a new organisational structure. In 2005 an additional company – in Sweden – was added to the group (making 12 companies in total and more than 500 employees worldwide). There is also a representative office in China.

At the beginning of 2006 the management structure of the Group was also reorganized when the original founder, Gerhard Metz, retired from active management of the Group in his 70th year. His role as chairman of the board was taken over by managing director, Joachim Jung, with Dr Armin Beying – responsible for engineering and technology – becoming a managing director and Dirk Jägers – whose responsibilities include worldwide sales, production and order processing – also became a managing director.

Undoubtedly the performance of IST Metz in its specialist field is impressive. Over 100,000 UV lamps have been produced to date. The efficiency of their UV systems has doubled over the past ten years. 500 UV systems were delivered last year into 62 countries, with over 40 per cent of all their lamps being used worldwide for the curing of labels. This includes lamps for narrow- and mid-web label presses, for sleeve label printing and for sheet-fed label printing.

It is certainly an impressive story and one which many label converters can attest to in terms of improved efficiency and lower running costs. Such attention to their customers' efficiency and performance should ensure IST Metz continue to have a successful future. ■

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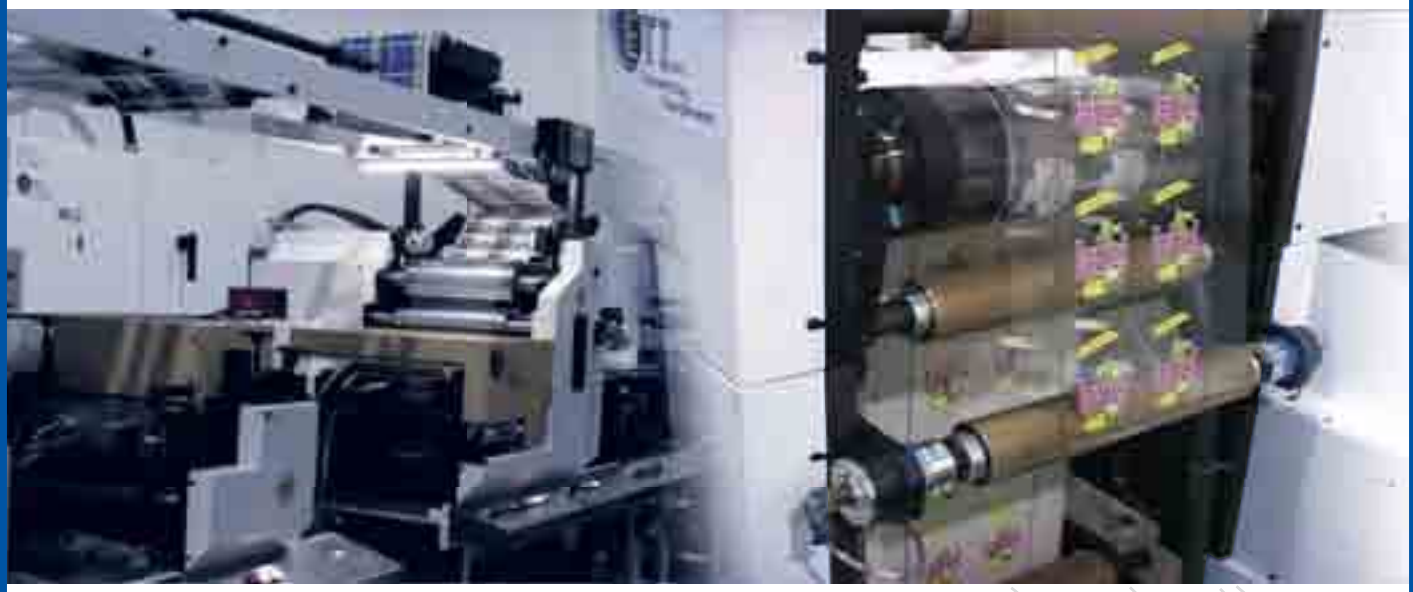

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Front row, left to right: Dan McDowell, Siegwerk's Group Executive Board (NAFTA); Hugo Noordhoek Hegt, Board member (PPL Packaging); Ralf Hildenbrand, Board Member (Flexible Packaging); Christian Vang, Siegwerk's Group Executive Board,(Asia/Pacific). Back row, left to right: Juan Carlos Salaberry, Siegwerk's Group Executive Board (South America); Dr Oliver Wittmann, CFO Siegwerk Group; Herbert Forker, CEO Siegwerk Group; Klaus Heger, Siegwerk's Group Executive Board (Technology Flexible Packaging); Dr Ansgar Nonn, Board Member (Supply Chain & Publication); Gilles Catherin, Siegwerk's Group Executive Board (Strategic Product Innovation); Peter Hilpert, Siegwerk Ink Packaging, Head of Business Unit Tobacco

What happened to SICPA?

A year ago, the SICPA brand was phased out following its acquisition by the Siegwerk Group. **Katy Wight** reports

Labelexpo Americas 2006 comes exactly one year after narrow web ink manufacturer SICPA was acquired by European ink giant the Siegwerk Group. SICPA was a household name in the label converting industry, but many printers – particularly those outside Europe – have little idea of who Siegwerk Group is or know about its roots in the ink manufacturing business.

Siegwerk is actually one of the oldest family-owned businesses in Europe. It was founded in 1830, in the city of Siegburg in Germany, and has grown to become the third largest ink manufacturer in the world. Siegwerk Group has 4,000 employees working in 36 countries, headed up by president and CEO, Herbert Forker. The group's net sales in 2005 accounted for €830 million ($1 billion), of which €660 million came from packaging applications and €170 million from publication inks. The packaging group is made up of inks for flexible packaging, tobacco packaging, labels, paper and board, sheetfed and UV, and decorative applications, and revenue from the label converting market account for 11 per cent of the packaging group's sales.

To increase its presence in the NAFTA region, Siegwerk acquired US-based manufacturer Color Converting in 2003 and then in 2005 it also acquired Swiss-owned SICPA, aiming to become the second largest manufacturer globally for flexible packaging and label. Structurally, the whole company has changed from a country-based organization to one focused around business units, which it hopes has added benefits for customers.

'With this clear focus on a business unit structure, Siegwerk is able to deliver a quick, competent solution to its customers located throughout the world,' explains Peter Hilpert, Siegwerk Ink Packaging. 'It's our priority to keep customers in close contact with their dedicated customer focus team, which is made up of sales, technical, and service personnel. These teams can provide regular updates, troubleshooting, and most importantly an open line of communication directly with the customer. Siegwerk is also using its website, www.siegwerk.com, to help new customers access product information, FAQs and downloads.'

Europe, the Middles East and Africa currently accounts for around 65 per cent of Siegwerk's sales, the NAFTA region 20 per cent, Asia Pacific 11 per cent and South America four per cent, but the company is focusing on growing developing markets such as Southern and Eastern Europe, Asia and Latin America. It currently manufactures narrow web inks in Switzerland, France, Malaysia, China, Canada and Brazil, but whether this will change, or more facilities added, will depend on the value that it will add for customers, as Hilpert explains: 'Constant product and manufacturing consolidation can bring about synergies or modifications in supply chain management. During any consolidation, the overall target is to remain within reasonable proximity to the customer and providing short delivery times.'

'In order to stay ahead of the narrow web market, Siegwerk also plans to grow its capabilities,' says Hilpert. 'Most of its customers print in combination and are constantly looking for competent application engineering when it comes to printing issues.' ■

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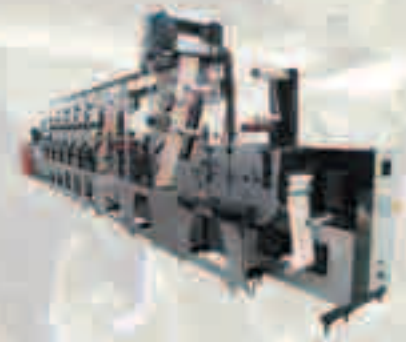

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Spain's label hub

L&L went on a tour of the Spanish region of Cataluña to find out what is happening in the focal point of the Spanish label industry. **James Quirk** reports

Cataluña, sandwiched between the Pyrenees and the Costa Brava in the North-Eastern corner of Spain, is the key region in the Spanish label market.

Statistics from Spanish label manufacturers association ANFEC show that between 2002 and 2005 the label market in Cataluña grew by an impressive 24 per cent. By 2005, it contained 44 per cent of suppliers' sales in the whole of Spain. This market dominance is emphasized by the fact that Madrid, the country's second most productive region and the nation's capital, supplied just 14 per cent in the same year.

Labels & Labeling went on a tour of the region, visiting a cross section of press manufacturers, paper suppliers, self-adhesive label producers and others, to learn about the new developments in this exciting market.

Sinel Systems

Sinel Systems, part of the Caposa Group, was started by the father of current managing director Jaume Puigbò in 1932. In 1958 it was the first label converter in Spain to produce self-adhesive labels.

'At that time we also produced our own label presses, which were quite advanced for the era because they were combination presses that were 50mm wide – letterpress and gravure amongst others,' says Puigbò. 'In 1968 we started to produce computer labels, when there were only three computers in Spain. Eventually we moved into thermal transfer labels, and also began to sell labeling systems. Now we have also moved into RFID.'

The company mainly serves the Spanish market, with 86 per cent of its business local to Spain, but it has a strategy which allows it to also flex its muscles abroad. 'We collaborate with other label converters in Europe, essentially looking for distributors,' says Puigbò. 'Label converters who have requests from customers for a label application which they cannot supply seek an alliance with us. Because we are not physically present in markets outside Spain, they know we do not compete with them directly.'

Puigbò says that Sinel has been educating itself about RFID for over ten years. 'I have been attending many conferences around the world, focusing on what the advantages are and trying to understand the business case for RFID,' he says.

The result of this study has led to the company being able to supply a complete RFID package. Sinel can offer its clients RFID tags; consulting services for RFID projects; machines that insert RFID into prime or logistic labels; an insertion service of RFID

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"Statistics from Spanish label manufacturers association ANFEC show that between 2002 and 2005 the label market in Cataluña grew by an impressive 24 per cent"

tags into labels; tag readers; and applicators that not only cut and print the label but also apply it automatically.

Now Sinel is involved with security applications, and developing labels with increased content capabilities. Another new product is the 'functional' label. 'We supply a two-sided die cut adhesive label for labeling in automatic applications,' explains Puigbò. 'They can be used for promotions when two items need to be stuck together. It was originally a request from a customer.'

Sinel has a rich history of product innovation: from being the first Spanish self-adhesive label manufacturer in the 1950s to the first to use rotary silk screen in the 90s. So which are the innovations of which Puigbò is proudest?

'We had a customer who wanted to make better use of its lorries for transportation,' he says. 'They had double deck pallets, so needed a special applicator which would label the two sides of the pallets, one up and one down. We were proud because the company couldn't find a single other company who could do it apart from us.

'Another interesting innovation in applicators was one used in Spain to make car license plates. You start with metallic plates and have to put continuous tape on them, so the tape must be die cut. It was therefore an applicator that had a rotary die cutter, something I have never seen before, so you could die cut the exact size of the tape that went on the plate.'

Sinel has received numerous awards from the Printer's Guild for the best printed label, but also recently won one for best innovation. 'We demonstrated a label that has a digital watermark,' explains Puigbò. 'It can be read with a normal webcam so the customer can learn more information about the product. However, because not everyone has a webcam in their homes, we have started to adapt it so the information can be read using a mobile phone camera.'

Jaume Puigbò of Sinel Systems; (top right) flag of Cataluña

Commercial Arqué

Commercial Arqué, founded in 1954, is a producer of hot stamping foils and thermal transfer ribbons.

'Hot stamping foils make up around 50 per cent of our turnover,' says Jordi García, TTR/textile product manager. 'We

Jordi García of Commercialh Arqué

Rotatek's Brava Star press was introduced at IPEX this year

also make thermal transfer ribbons and fabric for care labels. We manufacture small hot stamping machines, mainly for the local market; and we produce ribbons for PVC cards. For ribbons, we also do the magnetic stripes, and whatever is related to the plastic cards. Then we have many other products – for instance: synthetic paper, polypropylene. We detect what the customers need, and we try to enter into that market.'

While the company's traditional market was always local, since 2000 it has been expanding its production capabilities into Europe and the rest of the world.

'The problem with being in Spain is one of distribution,' says García. 'Deliveries to our nearby countries, France, Italy, Germany, are fine, but beyond that it becomes a problem. We are looking to expand into Eastern Europe, and the only way to do it is to open a plant out there.'

The move towards Eastern Europe was triggered by Labelexpo Europe in 2005, where Commercial Arqué made good contacts with companies from that region. 'For me,' says García, 'Labelexpo is the best show in Europe.'

The company already has distributors set up in Latin America, and Asia is the next target market: 'We would like to open a distribution plant and do some production in Asia. Crossing one border is fine, but more than that can take a long time. To compete, we have to solve that problem.'

While Commercial Arqué looks to increase its distribution abroad, it is also expanding into new technology. RFID, for example, is a new strategy that the company is looking into. 'We have been learning a lot about RFID in the last year or two,' confirms García. 'Two of the biggest distribution companies in Spain are thinking of doing a mandate similar to Wal-Mart for track and trace, so it is important that we learn.'

'We have several huge products in the pipeline with RFID,' he continues. 'We have approached many of our customers, who do specific applications for the pharmaceutical industry, for some laboratories, and for some distribution channels. We are trying to see if we can develop RFID in these markets.'

Rotatek

Machine manufacturer Rotatek has been producing offset presses for more than 35 years. The company moved into combination presses 20 years ago. Rotatek has offices in around 20 countries and exports presses to 70 countries worldwide.

'Our best market is Germany, where we have over 200 machines,' says Gaëtan de Charry, sales manager. 'Sixty per cent of the Spanish press market belongs to Rotatek, and 95 per cent of the offset press market.'

'We try to work very closely with our customers,' he continues. '60 per cent of our turnover comes from repeat orders, which shows the market's appreciation for our machines. We try to develop exactly what the customer is looking for.'

The company also has a plant in Brazil, and counts South America and India as other key markets. 'Ninety per cent of our production goes abroad,' says Bibiana Rodríguez, marketing manager.

Rotatek launched its new Brava Star press at IPEX this year. It is a unique machine: a fully modular, variable format, wet offset semi rotary press with shaftless technology that can become full rotary with manual change of cassette unit. It offers short, medium and large printing formats.

'If you look at the label market, most label printers were looking at flexo and letterpress instead of wet offset, because of the finishing facility you have on these presses,' says de Charry. 'But if you can give them wet offset quality with the same finishing, then that is what they are looking for.'

'This press is the perfect combination of the quality of wet offset with the flexibility of semi rotary and rotary,' agrees Rodríguez. 'A printing manufacturer wants flexibility, quality and low cost. With this machine you have everything.'

Rotatek is one of the few manufacturers who have onsite R&D, manufacturing and assembly line all on the same site. 'We don't subcontract, we manufacture,' says de Charry. 'We don't subcontract development, we develop ourselves.'

Gombau Autoadhesivos

Gombau Autoadhesivos is a supplier of pressure-sensitive labelstock with a product line which includes synthetic materials and self-adhesive papers and films for specialty markets such as wine.

The company has been based in Girona, north of Barcelona, since 1993, and opened a plant in Treviso, Italy, ten years later.

'Gombau started with commodities,' says marketing manager Eva Gombau. 'Then we began to approach different markets, and

If you can't complete this crossword...

DOWN

1 The individual element in the halftone printing process (3).

2 The contact point between two driven rollers (3).

3 The image transferred from the printing plate or cylinder to the label substrate (10).

4 Occurs when the adhesive squeezes out from under the backing in a pressure-sensitive laminate (4).

5 The process of raising a design or image above the label surface using a set of matched male and female dies (9).

6 Estimated time of arrival (3).

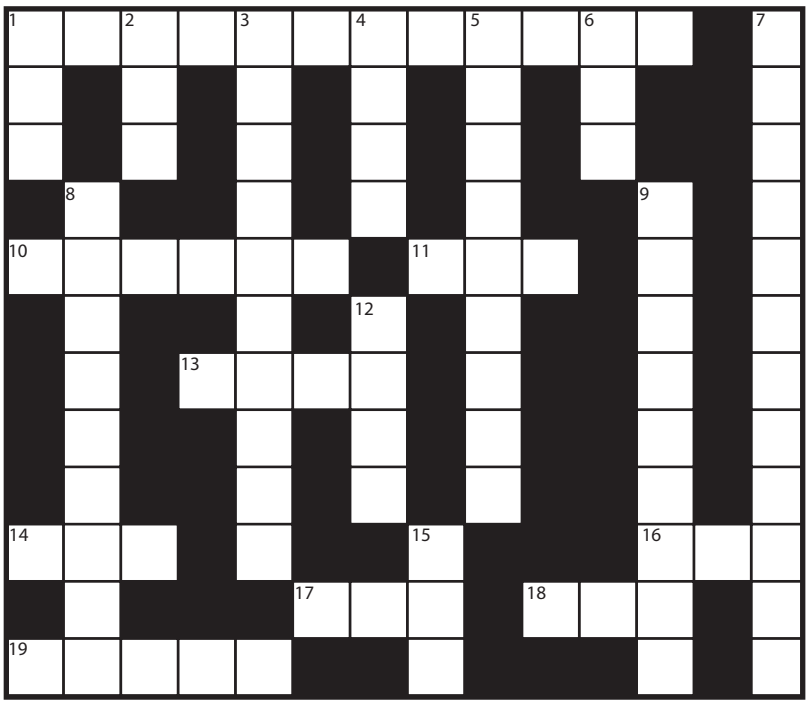
7 A set of characters or bars in a bar code which represents both alphabetic and numeric characters as well as symbols (12).

8 The areas of a printed image which are nearest to white (9).

9 Metal roller or drum that is cooled internally with water (5 and 4).

12 Abbreviation commonly used for capital letters (4).

15 Label placed inside the mold before a plastic bottle is blown (3).



ACROSS

1 A photoelectric instrument that measures reflected or transmitted light on colors or printed products (12).

10 A term used to describe various printing defects, such as spots or imperfections in the printing (6).

11 International Organisation for Standards (3).

13 The administration in the US Department of Labor that ensures a safe and healthy workplace (4).

14 The acronym or abbreviation used for primary colors of light (3).

16 A method of reading (scanning) printed text copy with software capable of recognizing and converting the scanned images into an electronic equivalent (3).

17 Original equipment manufacturer (3).

18 Thickness measurement of thin materials used in some countries (3).

19 Material to be printed or converted. Also referred to as the substrate (5)

Eva Gombau of Gombau Autoadhesivos

Agustí Dalmau of Chiasa (right)

in the last two to three years synthetic materials and the wine label market have become the company's core businesses.' In Europe, Gombau sells into the main areas of the wine market. 'We have a strong presence in Spain and Italy,' says marketing director, Luca Giorgio Pettinelli, 'and our presence in France and Portugal is improving.'

'Since we started in the wine label market, we have dedicated many resources to improve in this area,' he continues. 'We think we are very competitive in the wine label business – because we can use different technology and produce self adhesive materials especially for the wine label market. Because we have two companies producing material using different technologies, we can corner various applications and cross the difficulties to be found in wine labeling.'

The next step for Gombau, in terms of distribution, is the American market, and the company will be present at Labelexpo Americas in Chicago. 'We are interested to find out about overseas markets because some of them are growing faster than Europe,' says Pettinelli, 'so it is the logical next step after Labelexpo Europe.'

'It is difficult to compete in commodities like standard papers and synthetic materials in North, South and Central America,' he continues. 'So our plan is to sell only specialty products into these markets: very high-level wine label materials and synthetic materials for industries such as automotive and cosmetics.'

> "It is difficult to compete in commodities like standard papers and synthetic materials in North and South America"

So what are the technologies that Gombau uses? 'Our new plant is working with UV technology, which we are confident is the forefront of self-adhesive materials. UV technology gives us the possibility to diversify the products we can offer,' says Pettinelli. 'We are using water-based acrylics which have reached very high performance in the last ten years, because the technology has greatly improved. So using acrylic UV, we can play an important role in very specific and high applications.'

The next area that Gombau are looking to enter is digital. 'We are going to supply digital materials for HP Indigo,' says Pettinelli. 'Initially these will be dedicated towards wine labels, but we know that they can also be used for different types of labels. Digital printing is matching the requirements of a lot of label business nowadays, with the increasing tendency for short runs.'

Chiasa

Chiasa, a manufacturer of woven label stock for a diverse range of markets, was founded around 30 years ago as a joint venture between an American, an Italian, and two Catalans. The company also has plants in the Spanish city of Pamplona and Taiwan.

Chiasa prints exclusively on fabrics, and therefore does much of its business in the clothes market. It also produces tapes for fabrics, and produces its own formula to apply

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Gallus shows EM 280 press to Mexican market

Gallus ran demonstrations of its new press alongside Label Summit Latin America in Mexico City. **James Quirk** reports

At the same time as exhibiting at Label Summit Latin America 2006 in Mexico City, Gallus ran press demonstrations and a seminar at the Heidelberg Mexico showroom. Over 90 people attended the demonstrations, and 30 Mexican printers were present at the seminar.

The company introduced the EM 280 narrow web combination press to the Mexican market, with demonstrations showing applications for UV and water based, four color process flexo, as well as screen and hot foil stamping on various substrates. The demonstrations were given by Hans-Ramón Hoffman, Gallus sales director for Mexico and South America.

'It was a great opportunity to show this press to the market alongside Label Summit Latin America. The timing was ideal,' said Jon Guy, president of Gallus USA. 'We hope that our demonstration of commitment to the Mexican market will be rewarded.'

The press used for the demonstration had been bought by Mexican printer Impresos Hernandez, who invited many of its customers to see the press' capabilities.

The Gallus EM 280 is flexible and versatile in combining printing processes, with short set-up times for each job thanks to the quick-change platform and rapid ink change system. The fast changeover was emphasized by Hoffman as he gave his demonstration: 'The race is won in the pits,' he said.

'This press produces high quality labels,' said Joe Posusney, marketing manager for Gallus. 'It therefore differentiates itself in the Latin American market, where quality has not always been the priority.'

This year Gallus in North America celebrates its 25th birthday. A private celebration was held on 1st June, and a public one will be held at Labelexpo Americas in Chicago in September. ■

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Quality sheeting

Substrate supplier Madico Graphic Films has moved to integrate sheeting facilities in-house after experiencing difficulties with some outsource suppliers

Madico delivers high value, innovative pressure sensitive films for variable information labeling, product security, automotive, electronic, pharmaceutical and wide-format graphic markets.

In recent years the company has realized growth in excess of ten per cent. These growth targets and the continual price pressure in 'low end' business have driven Madico to develop new niche product solutions. Andy Voss, managing director, explains the company's strategy: 'General overcapacity has driven pricing and margins down. Wherever possible, Madico avoids price-driven products. We are not a turnover-led business.' Quality matters above all – especially in those niche markets in which Madico operates.

Until 2004 Madico focused on the slitting and inspection of master rolls. The sheeting process was undertaken by subcontractors, sometimes with unsatisfactory results, as Andy Voss describes: 'Madico slit and inspected the rolls before they were sheeted. But lack of confidence in our sheeting subcontractors meant that all jobs needed further costly inspection and highlighted high reject levels that would ultimately have led to customer dissatisfaction.'

The Madico example shows that outsourcing can entail risks, especially in processes that demand the highest quality standards such as the converting of batches. Voss explains the key factors: 'The major challenges in batch converting are electrostatic charge in the material, cleanliness in production, sheet length and squareness of the sheet. Typical damages are contamination, creasing and inaccuracy. Our subcontractors were not able to deliver the sheet quality standards we expected. Their machines were

"Lack of confidence in our sheeting subcontractors meant that all jobs needed further costly inspection"

Andy Voss, managing director; Alistair Coombs, general manager and Brent Croxford, machine operator

Avoids scratching: Brent Croxford with his SHM 1450 Compact

"We have been able to speed up our response to custom orders. We no longer need to slit material and then send it to a subcontracter and we no longer depend on varying lead times"

old and accuracy was poor. Also housekeeping was not up to Madico standards. Consequently, subcontracting our sheeting did not meet our quality objectives. With sheet sales enjoying double-digit growth we needed to pursue consistent standards in sheeting levels to ensure total customer satisfaction.'

The company decided to establish an in-house sheeting facility to assume responsibility for the quality of its converted products. Next to a higher level of quality control, a faster turn around of orders and better service for customers were key factors.

After evaluating the products of manufacturers of folio-size sheeting equipment, Madico got in contact with Körber PaperLink. Subsequently, cutting trials were undertaken in the USA on an SHM 1450 Compact machine by Pemco at their Sheboygan, Wisconsin production facility.

'During our trials we ran several 'hard-to-handle' films including mirror polyester and optical quality films coated with high coat weight 125 g/m2 adhesives and polyester release liners. These products are historically difficult to run without conversion defects,' Voss explains. 'The SHM Compact was quick to set up and immediately achieved excellent results with minimal to no set up waste. This combined with the overall build quality and excellent attention to detail pushed us to partner SHM for our sheeting requirements.'

The SHM 1450 Compact machine delivered to Madico is specially developed for converting highly sensitive products such as plastic and lightweight materials. The specification includes automatic web edge guidance, a digital slitter position measurement system and ionized air supplies. A sheet length accuracy of better than +/- 0.5mm is achieved.

Pemco also fitted, in collaboration with Parkland International, Madico's preferred slitter supplier, a trim rewinding system that recovers waste onto bobbins under controlled tension.

The new SHM sheeter covers the whole process: Material is held in stock in untrimmed master rolls. Madico now trims, slits and sheets the master rolls in one pass on the SHM. All operators had a good basic understanding of web handling since they were experienced slitter operators. So the training curve for Madico staff was short. After only one week of training by Pemco the staff had full competency with the sheeter.

Andy Voss is satisfied with the results: 'We have been able to speed up our response to custom orders. We no longer need to slit material and then send it to a subcontract company, we no longer depend on varying lead times dictated by a subcontract company. We have also eliminated additional transport costs and reject rates have dropped considerably as all materials are now inspected in-house.' ■

FINAT label awards

Finat's latest meeting in Warsaw saw the announcement of its international label award winners. **Andy Thomas** reports on the best of show

This year's FINAT labels competition attracted almost 200 entries from around the world. Jules Lejeune stressed that the judges had taken account of other aspects apart from print quality, including their effectiveness of the label as a marketing tool, security features, use in a logistics environment, customer convenience and functionality.

At the end of this process the judges selected 15 winners in four categories along with 46 others which were highly commended.

This year's FINAT label winners will now go forward to the World Labelling Association's competition in Chicago in September to challenge entries from the USA, Japan, Australia, India and Russia.

The principle category winners were:

Marketing and end-use applications:

Wines and spirits: Illospear, from Wales, for its Bombay Sapphire gin label. 'An excellent example of combination printing using UV flexo and screen processes. The use of very well-applied hot foil and varnish gives a nice tactile feel to the label. The clean and sharp type gives the label a very neat appearance.'

Food: Etisan Etiket, from Turkey, for a hazelnut chocolate label. 'An impressive label contrasting the colors and white lettering against a black background. The use of selective varnishing lifted the background and gave the nuts added depth. The fine type is very sharp and the decorative borders very well produced. A good example of letterpress printing.'

Household products: Skanem Liverpool UK for Sun Fresh Comfort. 'A bright, colorful label depicting country freshness. The contrasting use of yellows, greens and pinks with the blue background gave a nice balanced look to the label. Printed by UV offset and screen processes with an over varnish gives the label shelf appeal.'

Industrial: Skanem SkurupAB of Sweden for 'Tikkurila Taika', which also won the overall marketing group award. 'The pearlescent polypropylene substrate gave the label a silvery finish. The subtle shades produced by the clever use of CMYK and a matt varnish gave a delicate touch to the appearance of the label which also adds to its shelf appeal. The use of UV flexo shows what can be achieved with the flexo process. This label also included a peel and read feature because of the lack of space label for important information.'

Cosmetics: WDH SA from Poland for 'Avon Naturals'. 'A combination of UV flexo and screen printing resulted in a clean fresh looking label. The passion flower and the lime colors combined to add sparkle to the illustration. The fine type was sharp and well produced giving a clear 'no-look' label.

Pharmaceuticals: no winning award

Security: Securikett Ulrich & Horn GmbH from Austria with 2-Schichtiges Nummernetikett mit VOID. 'An interesting label printed in 13 colors in 3 passes by UV flexo and inkjet. Small, but effective, with good anti-counterfeiting properties.'

Booklets and coupons: no winning award.

Printing processes:

Flexographic: Labelsco, from England, won the group award with nu:green (and also took four out of the five nominated awards). 'An excellent example of UV flexo printing onto a polypropylene substrate. The use of a matt varnish lends a degree of sophistication to the end result. The flesh tones in particular were well produced and the use of the bright green contrasted well with the dark brown hair.'

Letterpress: BV Kolibri, from The Netherlands, with Greenland The Milky Way. 'The soft illustration gave a delicate look to the label. The halftones were very even and the transition into the shadow areas was smooth and excellent. The very sharp type and final varnish gave an overall nice finish to the label.'

Screen printing: Flexiket A/S, Denmark. 'The screen process was used to the full yet managed to produce high quality tone images on a mixed image label. The edge definition of the images was excellent and the intricate die cutting done to perfection. The reproduction of the tones was very sharp with delicate shades in the image areas.'

Offset printing (narrow web): Collotype of Australia. 'A striking label printed using the waterless UV technique. The gold foil against the rolling country scene of vineyards helped to generate a class of its own. An attractive label that draws the eye to the bottle on the shelf.'

Combination: Collotype of Australia for Stamp of Australia which also won a special commendation from the judges. 'This was a clean, sharp looking wine label. The use of a selective gloss varnish to highlight areas of the stamp and the 'seal' was subtle and well done. The addition of gold foil blocking and the depth of screen printing gave the label even more class.'

Alternative uses of a label press (for non-adhesive tags, cartons or promotional):

Non-adhesive tags: Marzeek Etiketten GmbH of Austria for 'Adelholzener'. 'Designed to promote bottled drinking water which it did very effectively. The vignettes were smooth and the dot formation good. The silver OPP substrate plus varnish gave a visually cool image to the contents of the bottle.'

Cartons: Kimbells Pack Inc of the Philippines with Zenzest Perfume KC – Water. 'A complicated product to produce. The printing was very good using letterpress and screen printing as the main processes. Laminating a holographic film to rigid PVC proved to be a challenge but gave the carton rigidity. Many difficult challenges were overcome in the production of this carton.'

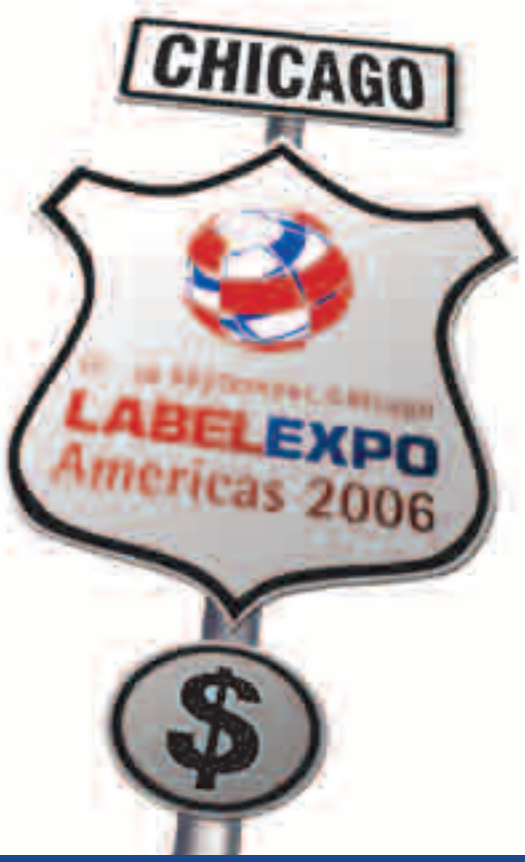
Promotional: Skanem Skurup Sweden with 'Summertime'. 'Printed using UV flexo, the label was in the form of a postcard with excellent halftone reproduction. The peel and read feature illustrated the capability of Skanem Skurup to produce such a label.'

Innovation

Schreiner Group from Germany with an antenna capable of receiving FM, AM GPS and other signals in an automobile. 'An interesting and different application of printing technology using screen printing as the basic process. Conductive silver inks were used on a PET base to save space and weight.' ■

Labelexpo Americas 2006

Labelexpo Americas 2006, taking place September 11-14 at the Donald E. Stephens Convention Center in Chicago, is the biggest business event in the labels and product decoration industry calendar. Over 450 industry suppliers will be exhibiting to an expected audience of nearly 13,000 visitors from North America and other leading global label markets.



With global label consumption of all label types being valued at around $60 billion worldwide in 2005, Labelexpo Americas provides the ideal focal point for this dynamic industry to meet and identify new and exciting opportunities available to international labeling businesses. Last year total US label sales alone totaled $5.71bn, showing the continued importance of this sector in the country's overall manufacturing economy.

Alongside the exhibition, an extensive conference program featuring leading experts from around the world will highlight the latest trends influencing and shaping the future of the industry. The main conference theme is 'Managing risk in the 21st century' and will highlight the latest developments in printing processes, prepress, digital technology, global business opportunities and consumer marketing trends, to name a few.

The three-day conference program is packed with expert speakers including the New-York based internationally renowned designer Karim Rashid, who will discuss packaging and label design for today's consumer society. Mike Meranda, president of EPCglobal US, will focus on the creation of global standards for RFID and smart technology and look at the realities involved in achieving standardization. Panel sessions will run over the three days with one of the sessions focusing on the global label industry and opportunities in developing markets. Anti-counterfeiting on labeling and packaging will also feature on the conference agenda with a focus on the latest innovations available to combat this fast-growing global criminal activity.

Labelexpo Americas will also feature the prestigious Label Industry Global Awards, now in their third year. The awards recognize and celebrate excellence in

the global industry. Calvin Frost, CEO of Channeled Resources has already been announced as the winner of the R. Stanton Avery Lifetime Achievement Award, sponsored by Avery Dennison, and the other winners' names will be revealed at a gala dinner on the opening day of Labelexpo Americas.

This year, the awards launch a new category, with the RFID Smart Label Manufacturer Award, which recognizes achievement in this exciting area.

Roger Pellow, Labelexpo managing director of the Tarsus Labels group, commented: 'We're looking forward to seeing the industry gather at this major event for the label, product decoration, web printing and converting sector. It's a fantastic opportunity for the industry to get together to do serious business, set up new partnerships, network and learn about the challenges facing label businesses now and in the future. The three-day conference will help converters and printers alike to understand the threats and opportunities in this fast-changing and highly competitive marketplace. The show is not only about information sharing, but also about rewarding the industry for its achievements and we look forward to the prestigious Label Industry Global Awards' Gala Dinner to be held on the first evening of Labelexpo Americas.'

Scott Pillsbury, chairman of TLMI and president of Rose City Label, Portland, USA, agreed that this will be an important show: 'TLMI has been a proud sponsor of Labelexpo Americas since the show was launched more than 17 years ago. Our converter members benefit by getting to experience the latest in equipment, materials, supplies and technologies – in one place, at one time. Our supplier members have an opportunity to reach a very targeted and motivated audience at the same time. In addition, through both its exhibition and conference program, Labelexpo Americas has been a valuable source of information about the new products and technologies that are changing the way we as converters do business. We are happy to support a show that has done so much for our members and the industry as a whole, and we look forward to a successful Labelexpo Americas 2006.'

In a well-received address to the European PS label Association FINAT in June, Pillsbury expressed optimism about the state of the US labels market. 'Both the US and the world economy struggled for the past several years, and this industry had just begun to recover after a hard-fought blitz on costs which had meant tighter margins and reduced profits,' he said.

Pillsbury noted that the TLMI's latest survey showed average profitability had continued to improve for the third year running for its label converter members. Pillsbury said the US labels market is 'robust and growing', and there are opportunities for both large and small, specialised players. Interestingly, Pillsbury believes that the high cost of better technology is a barrier to entry for smaller players, and this is likely to lead to converters making alliances amongst themselves to cover off different aspects of total customer service.

> 'With the cost of technology companies cannot afford to do everything and will have to form partnerships, with each providing a specialized part of that service"

'There is still a lot of business out there for the entrepreneurial company that wants to provide full service to its customers, but with the cost of the technology these companies cannot afford to do everything and will have to form partnerships, with each providing a specialized part of that service.' This makes the networking side of Labelexpo of critical importance to visitors.

Most companies responding to the TLMI's survey employed fewer than 100 and had a sole factory – 'so small business is still a force in our market,' said Pillsbury.

There will certainly be a lot of new technology on show this year. Several press manufacturers including Mark Andy, Aquaflex and Edale will be showing completely new machines, and there will be a heavy emphasis on all areas of digital printing, converting and workflow. New inkjet alliances have been formed in recent months, and it will be interesting to see where DOD UV multi-color inkjet is positioning itself in the label converting sector.

On a more lightheared note, Labelexpo Americas will offer visitors the chance to win a Harley Davidson. Visitors can enter the prize by collecting a competition card at the registration desk and by following the 'Labelexpo Trail'. The winners will be announced towards the end of the show.

We look forward to seeing you at Labelexpo in September.

Labelexpo Americas 2006
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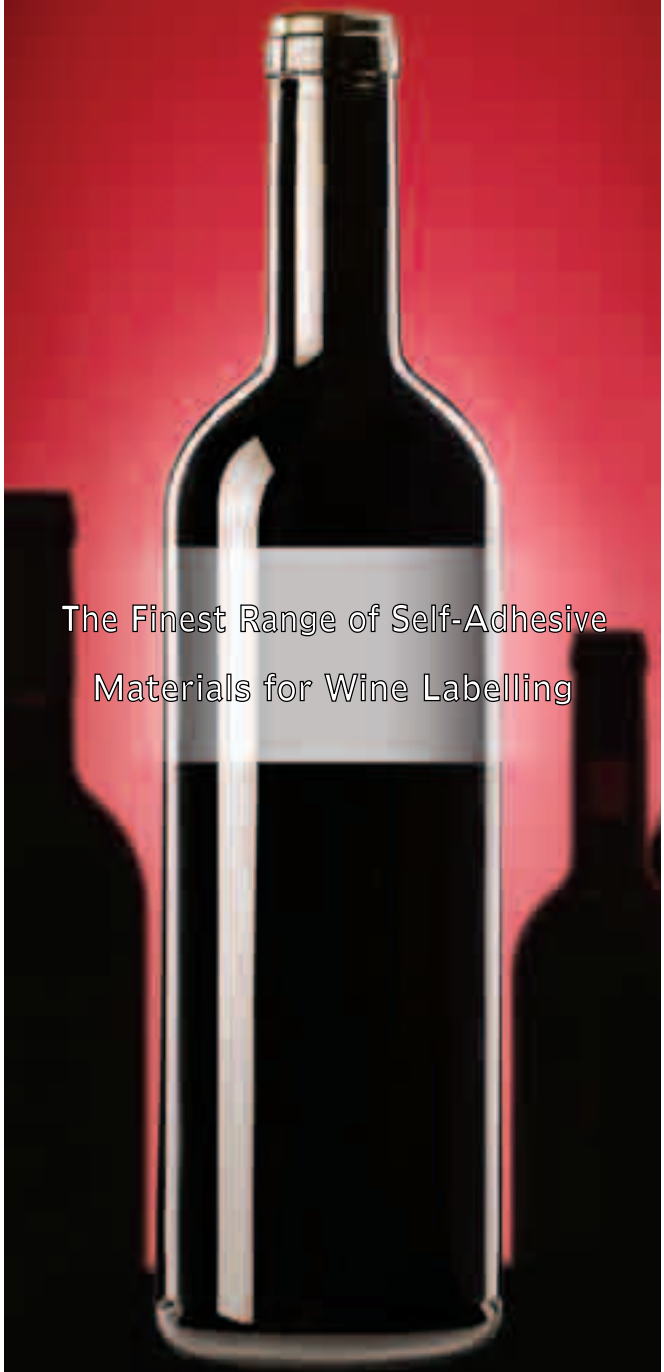

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Labelexpo Americas 2006 Exhibitor List

Exhibitor	Booth No.
ESKO GRAPHICS	5202
ETI CONVERTING	3622
EXXONMOBIL CHEMICAL CO.	5603
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FAUSTEL, INC.	2027
FLEX AIR	2006
FLEXCON COMPANY, INC.	1311
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FLEXO WASH INC.	1553
FLEXOEXPORT LTD.	1247
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FMS USA, INC.	3807
FOCUS LABEL MACHINERY LTD	6501
FRASER PAPERS LIMITED	1917
FSEA	5636
FUJI HUNT USA	6505
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Labelexpo Americas 2006 Conference Program

Day 1: Tuesday 12 September 2006
Managing risk in the 21st Century – Getting lean

09:00 - 10:30

Keynote Presentation:

The importance of the right packaging and labels design in today's consumer marketplace

Karim will discuss the critical nature of choosing the appropriate materials - including colors and graphics in regard to packaging design.

Keynote speaker: Karim Rashid, Designer, Karim Rashid Inc.

Based in New York, Karim Rashid is a leading figure in the fields of product and interior design, packaging fashion, furniture, lighting and art. He is best known for bringing his democratic design sensibility to the masses. Karim's packaging designs for San Francisco based Method have been the vehicle that has enabled a 5 year old start-up company with very little capital become one of America's fasted growing small companies this year according to INC. magazine. Karim has also designed award winning cosmetics packaging for Davidoff, 5S, Issey Miyake, Prada, Kenzo and Carolina Herrera among others.

09:15 – 10:15 STREAM 1: OPERATIONS

Success with prepress -completing the digital workflow

- How will JDF tie graphic arts workflow to your wider business
- Digital asset management and remote proofing
- Automating artwork workflow from preflight to output

09:15 – 10:15 STREAM 2: MANAGEMENT

State of the printing industry

- Industrial Label Production: What is it and what are the benefits?
- Future Growth Drivers & Market Opportunities
- Meeting the Demands of a Globalizing Economy

10:30 – 11:30 STREAM 1: OPERATIONS

Applying the Lean Culture

- How to become a Lean Flexographic Converter
- Applying lean principles can drive cultural change in aspects of your business
- Lean operations before and after the press cell

10:30 – 11:30 STREAM 2: MANAGEMENT

How converters are using digital printing today and what's on the horizon.

- How much is being produced and for which verticals
- Which converters are using, adoption rate by converter segments
- What to expect, a snap shot daily operations and performance of the average full color digital press
- The need for variable data printing is emerging for track
- trace and brand protection and promotion purposes
- What's new with suppliers

10:30 – 11:30 STREAM 1: OPERATIONS

A supplier perspective on lean operations

- How working with your supplier can help you achieve a Lean Environment
- How to reduce inventory costs, eliminate waste and improve throughput
- Quality improvements and how those benefit the converter

10:30 – 11:30 STREAM 2: MANAGEMENT

Servo-based Narrow Web Presses: Am I getting the shaft?

- What are Servo motors?
- How do Servo's achieve their superior precision?
- What is involved in selecting the correct Servo for a press application?
- How are Servo's applied to existing technology?
- How are Servo's applied to new press designs?

Labelexpo Americas 2006 Conference Program

Day 2: Wednesday 13th September
Managing risk in the 21st Century – In your operation

8:15 – 9:00

Improve Gross Margin in an Environment of Over Capacity

Pat Paterson, CCO - ColorTree of Virginia

- real world business success
- program that will work for those willing to change their thinking
- explain how to capture data that will lead to making the right decision for your business

09:15 – 10:15 STREAM 1: MANAGEMENT

Will sustainable packaging affect your business?

- What is sustainable packaging?
- What are some concerns regarding adhesives – PSA and EBA issues
- Status of environmentally benign adhesives in government and industry
- Sustainability in the label and shrink film industry
- The impact of the Wisconsin legislation on our industry

09:15 – 10:15 STREAM 2: OPERATIONS

Selecting and implementing an ERP system -- practical steps to maximize your chances of success

- The selection and implementation of an ERP system
- Why bother? Benefits, selection methodology, types of vendors
- Practical case studies

10:30 – 11:30 STREAM 1: MANAGEMENT

Global label perspective

- 'Low hanging fruit' - opportunities in developing markets
- Building partnerships - becoming a global player
- Outsourcing - threats and opportunities

10:30 – 11:30 STREAM 2: OPERATIONS

Creating Leaders & Empowering employees

- Characteristics of today's leaders
- The importance and development of front line supervisors
- How communication and involvement empower employees

11:30 – 12:30 STREAM 1: MANAGEMENT

Anti- Counterfeiting Labeling and Packaging

- 'Counterfeiting of consumer goods is reaching unprecedented levels
- '$35 Billion in counterfeit Drugs: opens the door for bioterrorism in U.S.
- 'Profit from Counterfeit Products is traced to organized crime and terrorists
- 'Counterfeiting is Stealing, and violators must be prosecuted
- 'Witness new technology to invisibly authenticate merchandise and track & trace individual items

11:30 – 12:30 STREAM 2: OPERATIONS

Behind the Label - Key trends and insights

- Learn about major consumer goods industry trends & specific needs of end-users serving those markets
- Recognize the importance of packaging & label design to end-users, retailers and consumers
- Understand the end-user packaging & label selection process
- Uncover key enablers of pressure-sensitive technology
- Identify and capitalize on situations conducive to adoption of pressure sensitive technology

Die-cutting without the Die!

When it comes to short print run, "get it out today" turnaround, the Allen DFS System is a must-have converting solution for your business. Laminating, digital die-cutting, stripping, slitting and re-rolling highlight the DFS technology. You won't find a total solution like this anywhere else in the industry. Since 1980, Allen Datagraph Systems has been pioneering technologies that address the urgent needs of business...your business.

For more information, visit our website or call **603-893-1983**.

** feature is a purchase option*

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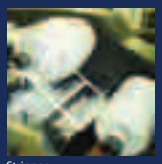
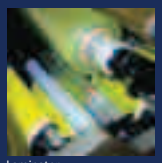
ALLEN DATAGRAPH SYSTEMS, INC.


Stripper


Laminator

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info@allendatagraph.com

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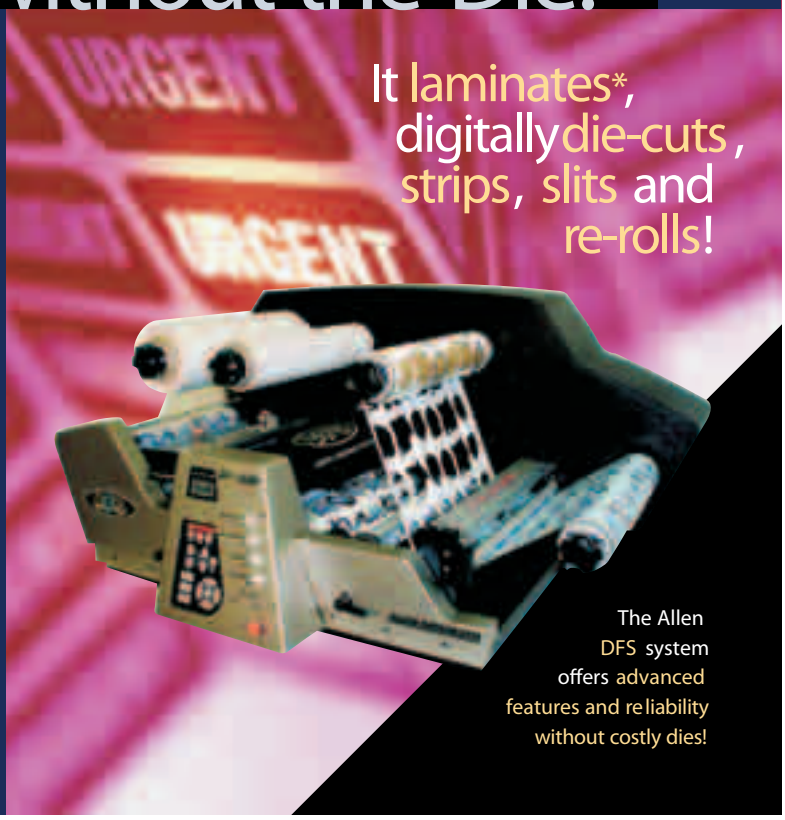
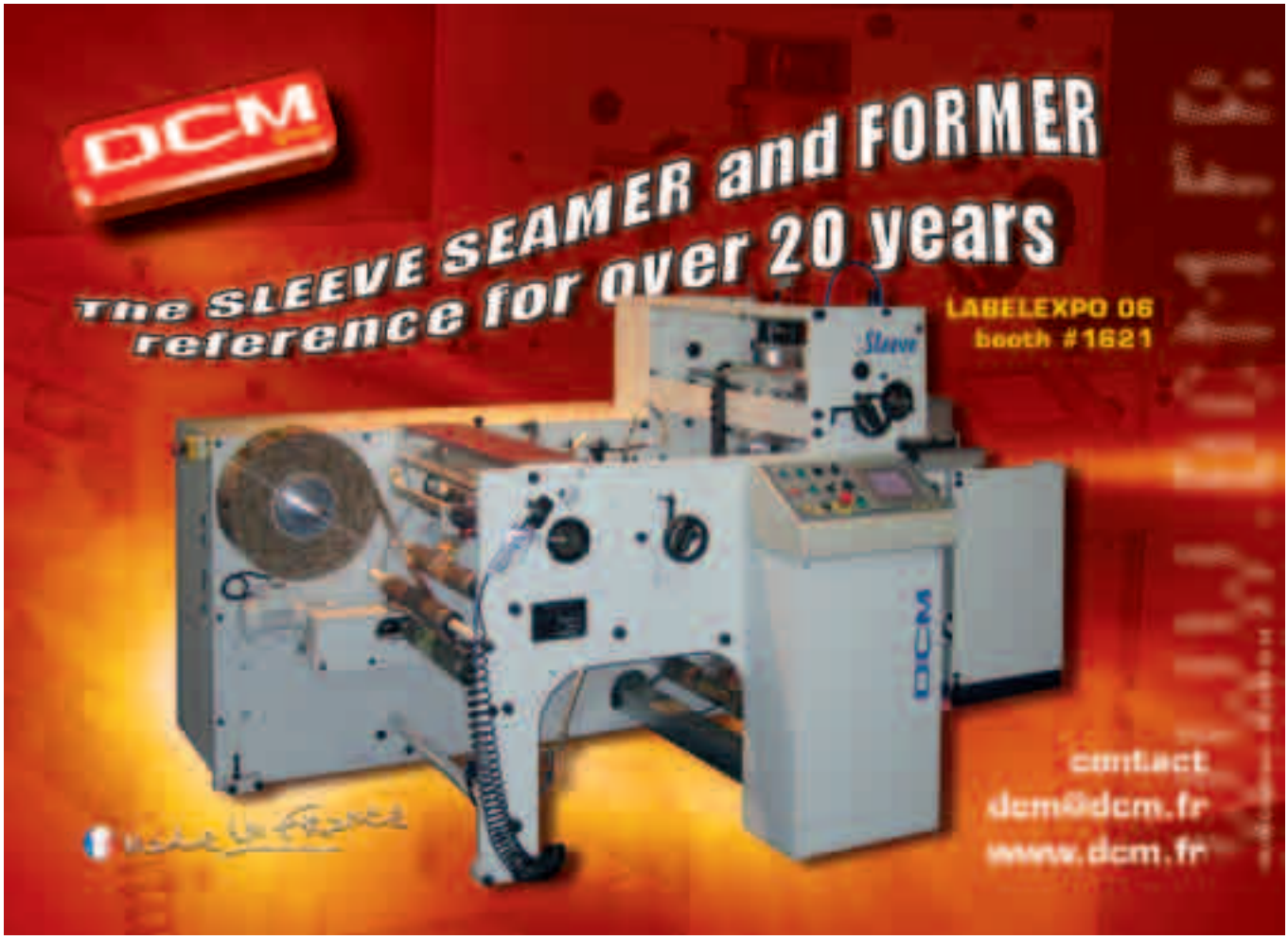


It laminates*, digitally die-cuts, strips, slits and re-rolls!

The Allen DFS system offers advanced features and reliability without costly dies!



Labelexpo Americas 2006 Conference Program

Day 3: Thursday 14th September
Managing risk in the 21st Century – RFID/Smart label technology

08:00 – 08:35

Keynote Presentation: Creating global standards - fact or fiction?

Mike Meranda, President, EPCglobal, US

- Meeting the global brand requirements on a universal tag - is this possible?
- What value does the Gen 2 tag bring to the industry?
- Looking at standards for HF and UHF

08:35 – 08:55

How to future-proof your RFID program

- Current requirements for your RFID program
- Will today's investment meet tomorrow's needs?
- Future form factors of RFID technology being researched, including item level tags

Dave Edwards, Chief Technical Officer, Avery Dennison

08:55 – 09:15

Evolution of Converting Equipment for RFID Tags and Labels

- Current capabilities needed for RFID Tags and Labels manufacturing
- Investment options for Converting Equipment
- Future possibilities for RFID Converting Equipment

Ken Daming, Director, Mark Andy

09:15 –09:35

In-line and Off-line Testing

- Current requirements of end use customers
- Different options for in-line testing
- Where off-line testing is required

Scott Seltzer, Product Engineering, Alien

09:50 – 10:10

Challenges in Manufacturing and Selling RFID Labels

- How good are your RFID labels? (what is a good label and what is a bad label)?
- What are the challenges in manufacturing 100% readable RFID labels?
- Understanding how to specify your RFID labels properly

Andrew Grace, Director of RFID business unit, George Schmitt & Co

10:10 – 10:30

Emerging markets in RFID

- Current markets driving RFID Label demand
- Types of RFID Labels and their applications
- What markets will drive item level tagging?

Jan Svoboda, Marketing Director, Raflatac

10:30 – 11:30

Panel Discussion with all speakers

Moderated by: Mike Fairley, Director Strategic Development, Label Group, Tarsus Exhibitions & Publishing

Labelexpo Americas technology preview

Andy Thomas looks at the new technology developments across presses, digital, consumables and materials which will define the future direction of the labels industry at Labelexpo Americas in Chicago this September

HP Indigo

Although we did not have full details of what HP Indigo will show as we went to press, the company says its exhibit includes the HP Indigo ws4050 digital press, finishing solutions such as coating and laser die cutting, advanced digital front end solutions, and business development tools.

UPM Raflatac

The company shows the latest developments in its film and RFID product portfolios.

Mark Andy Comco

Mark Andy Comco is launching the new Comco C2 press series, the long awaited successor to the MSP ProGlide. The new I-Drive – Intelligent Drive System – is the foundation of the Comco C2, 'bringing together servo technology and advanced controls focused on precision print management and simplifying operations,' according to the company. Mark Andy Comco claims the 'measured print quality (is) comparable to sheetfed offset.' The sleeve-equipped press achieves running speeds of over 1000 fpm (305 m/min).

From the Mark Andy brand, the company will be displaying its servo-driven XP5000 press, incorporating fully automatic registration, pre-registration and re-registration.

Labelexpo is also the first time the North American market will see the already successful VSR line of inspection rewinders. With 100% inspection capabilities, the line is available with several options from die cutting through high-speed film application capabilities.

Finally, the Mark Andy 2200 has been completely renovated and updated. After more than 20 years of this successful design, the line has been extended to cover a range of option packages, from a more simplified 2200 L model to a highly sophisticated 2200 XLS model with a servo motor package.

The 2200 at the show will be equipped with the RedHawk productivity system from Operon Systems, a turnkey data gathering and analyzing tool which helps converters optimize manufacturing efficiencies by monitoring all production processes levels of the machine.

Nilpeter

Nilpeter USA gives the first US demonstration of its new FA4 press, and shows the latest version of its MO3300 and FB3300A presses. The FA4 press is fully servo-driven with 'easy-load' sleeve technology and optimized to handle multi-substrate packaging materials.

In addition, this is the first time that US label printers will be able to see the fully servo-driven version of the MO3300 rotary offset press, and the servo-driven FB-line.

Nilpeter will also have a full-UV FB3300 press on Kurz Hot Stamping Technology's stand demonstrating a range of foiling and hologram developments.

Aquaflex

Aquaflex will be introducing and demonstrating two new Servo presses. New to the Aquaflex line is the FPC Servo packaging press. This is a fully servo-driven press that features an inline print head and sleeve technology for the print cylinders and anilox rolls. Available in 16", 20", 24", 28", and 32" web widths, the FPC is a multi-substrate packaging platform that prints at speeds up to 1000 FPM on 60 gauge unsupported film to .024 point board.

First shown at the 2004 Labelexpo as a concept press, the FPC is now fully commercial with the first press in operation at

the Control Group in Norwood, New Jersey. The FPC demonstration will feature a shrink sleeve printing on chilled idler rolls with UV inks.

Also being demonstrated is the new Aquaflex ELS Servo for tags and labels. The ELS is an electronic line shaft servo-driven press that prints at speeds up to 750 FPM. Available in 10" and 13" web widths, the ELS is claimed comparably priced to mechanical presses in its class, making servo technology available to small and mid-sized label printers. In addition to printing on all the standard substrates, the ELS adds the capability of printing unsupported film enabling label printers to expand their products to include flexible packaging. Since the first production ELS Servo was installed this spring at LabelTek in Wadsworth, Ohio, several additional presses have been sold.

The ELS Servo will demonstrate printing a pressure-sensitive label with security features. It will also be printing UV inks with holographic cold foil and hidden lenticular images.

Mac Rosenbaum, vice president of F.L. Smithe Machine Company, said: 'When F.L. Smithe acquired Aquaflex our vision was to have the entire line film-capable. With the addition of the new ELS Servo we have realized that vision. Aquaflex has deep roots in the tag and label industry, that's why we chose to make our servo technology available to them at very competitive pricing. The ELS creates an open door to explore opportunities in flexible packaging.'

Edale

UK-based flexo press manufacturer Edale will be attending Labelexpo America with its new American company setup, Edale America.

The launch of Edale's newest and most flexible converting machine will be the highlight of the stand. The company says its Lambda line offers a 'plug and play', full servo-driven solution, presenting easy future upgrades through the incorporation of additional converting, printing or laminating modules, to suit alternative value-added applications.

The Lambda, at the show, will be configured as an RFID solution, with an RFID inlay module supplied by Tamarack. Each Lambda is bespoke built, with typical applications including RFID insertion, booklet insertion, security applications, multi-layer, scratch-off, automotive, medical and R&D.

Complimenting the Lambda will be the Alpha flexo press configured as a 10", 5-color press, with four IR dryers and one UV dryer, producing a food packaging label.

'The Alpha appeals to a wide range of printers who could be: looking to download their 1 to 5-color work from more expensive presses, new starters or diversification from offset,' said the company.

Focus Label Machinery Ltd

Focus Label Machinery Ltd will show their latest, compact C.I. press – the Centraflex, running on unsupported film. The Centraflex is a six color, multi-substrate press, available for 10" or 13" web widths, equipped with rapid change print cartridge system. Options include rotary cold foil, UV varnish, reverse side printing & Corona treatment.

For fabric labels, Focus will show the new LX6 Letterflex press with in-line ultrasonic cutting system. The new LX6 has quick change print cartridges, self setting print cylinders & on run print registration. Also on show will be the Platemate video platemounting system.

MPS

Live demonstrations will be given on a 9 color 16 inch wide EF (Effective Flexo) press, running pressure sensitive materials as well as mono film. Substrate change will be shown as well as a color change at full web speed (Nonstop Print Change: NPC technology). With the EF, the converter has total flexibility in the choice of position for converting technologies;

MPS will also shows examples from its full press line, including: the EP (Effective Printer) with integrated screen (IFS technology) and the EC (Effective Converting) servo driven label press

GiDue

Italian press manufacturer GiDue will introduce its new Xpannd UV offset hybrid press to the United States labels and packaging market. On show will be a 370mm (14.5") wide printing unit from the Xpannd press to demonstrate the design concept of this versatile machine that can be equipped with any number of combination processes including UV flexo and screen printing technology.

The press is designed for frequent job changes and short runs – the press is optimized to idle down to 12 m/min (40fpm) during job set-up to limit waste, for example.

All job and printing parameters on the press including ink wash-up and ink/water dampening on the offset print units are automatically controlled. The press prints at 150m/min (490fpm).

The Xpannd was launched during the recent Converflex exhibition in Milan configured with both UV offset and UV flexo printing units and complimented by a new, pneumatically operated slide in slide out cassette system on guide rails to simplify changing the printing heads. The press featured the new Intelligent Register system from GiDue for automatic register of the printing units and PC press interface for interactive print management and job tracking.

The new press is also available in 430mm (17") and 530mm

The latest generation Flexy-S from Omet

(21") widths with a wide range of converting options and can be specified to include any combination of UV flexo, offset or screen printing.

Gallus

Gallus shows the latest version of its workhorse EM 280 press in a 9-color configuration, now offering servo drive technology for high substrate flexibility, chambered doctor blade system as well as a hot-foil saving and hologram insetting device.

Also on the stand is an 8-color EM 510 S press, which uses a hybrid system of mechanical and servo drive combined with sleeve technology.

Established in 1981 in Philadelphia, Gallus Inc. is this year celebrating its 25th anniversary of presence in the United States. Gallus Inc. will later in the year open a new showroom and demonstration facility to mirror the capability of the company's headquarters in St Gallen.

Omet

Omet shows the latest generation of its Flexy-S machine equipped withy servo-motors and the patented Twin-Cut die-cutting unit, which allows changing of the cutting format without changing magnetic cylinders. Also on show is a flexo printing unit of Varyflex to show the company's sleeve printing technology. Flexy-S will have eight flexo printing units and one silk screen Omet printing unit.

MPS

At the show MPS will exhibit all four different product lines, with live demonstrations of a 9-color 16" EF press

Codimag

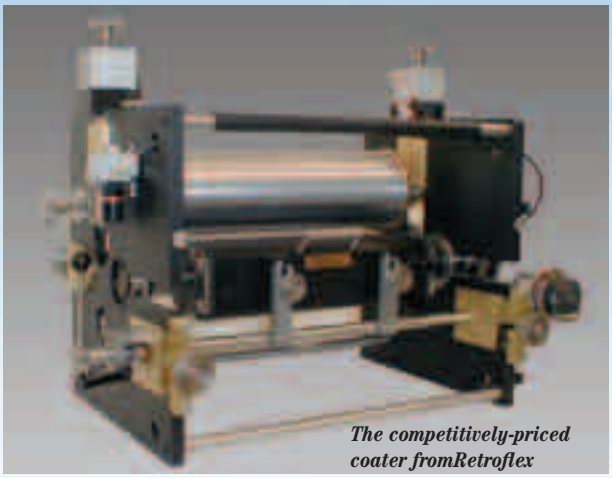
Codimag will be exhibiting its VIVA 340 Waterless press, combining offset technology with hot-stamping and screen-printing. Based on an intermittent-feed drive system, printers can do any repeat lengths without changing cylinders. Live job changes will be carried out on the booth several times a day.

Sohn

Sohn Mfg. will be showing for the first time in the states the model 8400, an 8" compact 4 color flexo press with UV. Sohn will also be featuring the auto register rotary die cutters that work with thermal or digital printers or stands alone. The 6503 & 4400 will also be on display.

Martin Automatic

Martin Automatic will demonstrate its advanced Waste Reduction System for the first time at Labelexpo. This 'intelligent' system maximizes the useable amount of substrate on every roll to significantly reduce the waste normally left on the core. Martin will also showcase the MBSF automatic butt splicer for label and film inline with the LRD automatic transfer rewind, and the new MBNT butt splicer and STR turret – an economical combination delivering a fast payback.



The competitively-priced coater fromRetroflex

Telstar Engineering
Presents on the spot design engineering consultation with its exclusive Cad-to-Go program. The booth will be filled with custom converting retrofit equipment to help cultivate application ideas. Solutions include servo drives, multi web applications, decorating options and more.

AAA Press
New product launches include the Lightouch Side-loading Slim Line UV lamp cassette; Opti-web Infeed tension control; Maximizer IR drying; and the Portable Roll Lifters with optional integrated die lifter. AAA Press will also launch the company's on-line store for purchasing replacement parts and press accessories, with real-time shipment tracking and individual account review.

Printco Industries LLC
Printco will introduce the corrosion resistant 'Trulyte Chamber' doctor blade system. The polymer technology of this system is approximately 40 per cent lighter than aluminum and about 80 per cent lighter than steel. In addition it has the ability to stand up to all kinds of water based inks and coatings. Printco Industries LLC is also offering combined flexographic printing presses and gravure coaters.

FlexAir
Shows its new FlexAir Slim Line Dryer, offering converters an affordable solution to boost drying capacity on tag and label presses. FlexAir will also be introducing a UV Combo drying system. This is a dryer that can take a press from UV to waterbase inks in a short changeover time.

Coating systems

ETI
Demonstrates benefits of its Cohesio/Labeline technology. Pre-printed or not, any face stock and any release liner can pass through the Cohesio/Labeline to become pressure sensitive. ETI Labeline technology offers the possibility to print the facestock on both sides, apply the silicon and the adhesive and convert the materials into pressure-sensitive substrate, all in one machine.

Retroflex
Retroflex introduces a budget priced printer/coater that can be added to an existing line or be purchased as a stand-alone. It can be designed as either a flexographic or gravure printer/coater. The width of this press can vary from 10" through 60" wide and run at speeds up to 500 FPM. There are options of it being web driven, tied to an existing drive, or servo driven. This is an inexpensive unit that can also be added to an inline printer to gain coating capabilities.

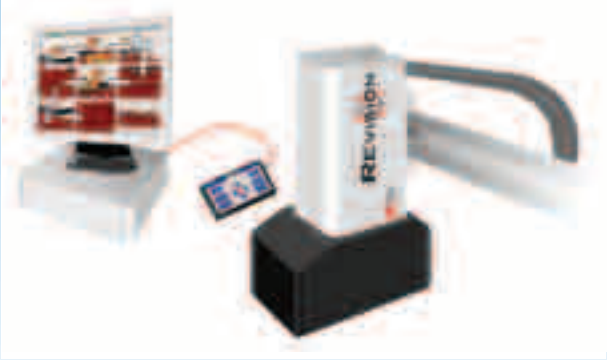
Diversified Innovative Products (DIP)
Displaying a complete line of 'Quick Change' Ink Fountains Systems for the Narrow web flexographic printing industry. On display at the show will be the latest fountains for the new servo drive presses from Mark Andy/Comco, Nilpeter and Aquaflex. These 'Quick Change' ink fountain systems eliminate the unnecessary and time consuming job of ink fountain wash-ups creating quicker turn-over times and increase pressroom efficiencies.

Luen Hop Engineering & Enterprise Co. Ltd
One of the biggest manufacturers of screen and pad printing machines in China demonstrates its latest fully automatic roll to roll screen printing machine.

Digital printing

Punch Graphix
Punch Graphix, through its Xeikon brand, will demonstrate the Xeikon 330 digital color press, printing at a resolution of 600 dpi with variable density levels per dot, in combination with screen rulings from 85 lpi to 170 lpi. The Xeikon 330 can print at a top-speed of 14.7 m/min (48 ft/min) and on media widths of 320 or 330 mm (12.6" or 13"). Since the Xeikon 330 is a full-rotary printing press, the positioning of the labels can be adjusted to meet finishing equipment requirements, irrespective of the size of the labels. Furthermore, it enables printing oversized label

The new ReVision video inspection system from Double E Company



formats. A special optical sensor allows printing images precisely in register on pre-printed stock or security materials. The Xeikon 330 integrates seamlessly with virtually any existing in or off-line finishing equipment, allowing the user to fully customize his production and finishing workflow.

Primera

Shows its LX810 full-color, photo-quality printing system, for imaging text, photos and barcodes onto labels. Print resolution is 4800 dpi and printed labels are water- and scratch-resistant. The LX810 comes equipped with printer drivers for Windows and Macintosh along with label design software called NiceLabel SE, Primera Edition. Primera will also be exhibiting a new, higher-capacity digital label printer.

Digital Print

Digital Print, Inc. will feature two new HP-based ink jet technologies and its popular Drop-on-Demand UV-curable ink jet, all powered with DPi's new Raptor printer controller. Print resolutions are up to 600 dpi, with print speeds up to 600 fpm and print widths up to 8.5-inches.

Printing Technology Services, Inc. (PTS)

Demonstrates variable data ink jet printing solutions for integration into flexo presses, litho presses, collators, finishing systems, and sheet-fed systems, for both on-line and off-line printing systems. Employs a wide variety of inks for both porous and non-porous substrates of all types (paper, plastics, films, and foils). PTS also offers image verification capability using barcode scanners and/or digital cameras, as well as invisible ink and other security printing applications.

Graphic Marking Systems

Graphic Marking Systems will be demonstrating digital short run printers with integrated die-cutting and small footprints. Distributes Gerber and Matan printers. Also samples of specialty materialss including High-Bond metallic polyesters.

PAT Technology Systems Inc.

PAT Technology Systems Inc. will be introducing what it claims is the world's first digital UV coater and semi rotary die-cut and converting system. Complementing a digital press, the PAT system will perform flood or spot coating, textures, and special effects without plates and requires only a digital file.

Mimaki USA

Shows its specialist large-format plotters and cutters and the latest, smaller, more affordable plotters, plus new break-throughs in printing for UV curable ink jet systems.

Allen Datagraph

Shows its Digital Finishing System, an all-inclusive, roll to roll converting solution allowing users to laminate, die cut, strip and slit in one production pass. Based upon plotter cutter technology and utilizing a small pivoting blade, the DFS can die cut any custom shape on demand.

Allen Datagraph recently introduced its Digital Label System, which includes a high resolution ink jet printer, computer, design software, RIP and the Digital Finishing System, along with training, technical support and consumables.

Scheduled to be introduced at Labelexpo is the sheetfed version of the Digital Finishing System. The new unit will accept unsupported or non-pressure sensitive sheets combining them with an adhesive layer and an over lamination transforming the individual sheets into a continuous web.

Web handling

Dover Flexo Electronics(DFE)

Dover Flexo Electronics(DFE) introduces the WebHandler3 tension controller, a closed-loop controller which delivers automatic digital tension control with an uncomplicated touch-panel interface. The NWI Narrow Web Tension Transducer is a cantilevered narrow web transducer with an optional built-in LED tension display and a 0-to-10VDC output. The 1D6D single disk pneumatic brake is a low-cost tensioning solution for unwind applications with low-torque requirements or installation space constraints. A single diaphragm provides low actuation force for low-tension applications. The TI17B tension amplifier is an economical solution for amplifying the tension signal output from any of DFE's tension transducers for connection to a PLC, drive, or controller.

The Double E Company

Double E will debut a new differential rewinding shaft. The DRS-4000 simplifies loading and unloading, and accommodates narrow slit widths down to a half inch. The new 'ReVision' video inspection system offers a CMOS sensor with 3 million pixel resolution.

Mach III
Mach III Clutch, Inc. will exhibit its latest SensiFlex tension control clutches and brakes, claimed to deliver continuous smooth slip operation and superior heat dissipation in a cost-effective, air-actuated friction design. Products are available in flange mounted, shaft mounted and foot mounted options, providing drop-in readiness for upgrading existing equipment and maximum design flexibility for the OEM

North American Manufacturing Company
Demonstrates web guiding solutions in the SimPlex family of products.

Materials

Avery Dennison – Fasson Roll North America
Fasson products at this year's show include conformable films, resealable packaging, and unique beverage applications. High volume, high-speed dispensing with unique paper/PET constructions will also be showcased, along with new 3.0 mil polyolefin films ideal for full-squeeze tube applications. Get a close-up view of Avery Dennison RFID's broad portfolio of RFID inlays.

Treofan
Treofan recently announced a $45 million/50 million-pound expansion in their Americas manufacturing facility. A significant percentage of this new capacity will be dedicated to multilayer, coextruded label films. The company will transfer Label films production from Europe to their Mexican plant in 2007 and will introduce several new products.

At Labelexpo, Treofan will promote their range of IML films, cut & stack and roll-fed wrap-around label films. Label film grades include: Transparent (no label look), White Opaque, Metallized and Matte.

Green Bay Packaging
An expanded pressure-sensitive film line for prime labels will be one of the new items showcased by Green Bay Packaging Inc. Included in this line are films for squeeze applications, and PLA films made of corn. Several new variable information products will be available, including an economy grade thermal transfer stock. An extended assortment of materials for HP Indigo digital presses, such as metallized and prismatic papers, as well as wine label grades, will also be shown.

MACtac
MACtac has improved its BOPP films for roll label printing. MACpropy and MEDAclear films have been optimized for UV flexo printing, allowing better solid coloring and a better rendering of the visual with less mottling effect. These films are available with the MP 128 N emulsion based adhesive and with the MP 710 N hot melt adhesive.

Also new is MACtac's EDX9512 premium bright white labelstock with ST-95 adhesive, the LAS1812 laser product – claimed to exhibit an exceptionally bright, white face stock – and MACtac's patented non-ooze 910 adhesive and layflat liner. MACtac also introduces new direct thermal (DRX9502) and laser (RX9512) labelstocks for pharmacy applications and an improved DL7172 dairy label claimed to have excellent wicking resistance and harder adhesive (less ooze) for better converting and applications speeds.

3M
New products include UV and graffiti-resistant overlaminates, HP Indigo optimized label materials for digital printing, flame retardant polyester facestock, sheeted label materials for screen printing and plate mounting tapes for flexographic printing.

Applied Extrusion Technologies, Inc
AET Films will feature the TOppCure Labeling System, an alternative to pressure sensitive and cut & stack labels It will also exhibit a full offering of roll-fed label films, new cut & stack label films, vision shrink label films for contoured containers, and SynCarta synthetic media in tags and labels engineered for digital print surfaces. New pigments include fluorescents.

FLEXcon
Products to be highlighted include a new line of films for price-sensitive drum labeling and durable product marking, and a new high-temperature, flame-retardant labeling product.

Technicote
Technicote features many new label products, including its new RFIDentity products comprised of RFIDfend and transRFID; a broad range of paper and film security label products; several new wine label products including Classic Natural White Felt; EarthFirst PLA film, IRC film label, and the company's new TM-55 repositionable adhesive on a solar yellow facestock.

Northwest Coatings
Northwest Coatings introduces UV/EB curable special effects coatings including; pearlescent, glitter and color changing effects to enhance the appearance of printed materials for commercial

and consumer product packaging.

An example is Phantavision, which produces high contrast color shifts with sharp changes in viewing angles, while smooth changes occur with gradual curves. Phantavision coatings can be tailored to produce a variety of different colors and appearances.

Northwest's special effect coatings are designed for both web and sheet-fed applications and may be applied in-line or off-line over most inks, primers, and substrates.

Also new is FA331FLA UV film laminating adhesive, optimized to bond a broad array of treated polypropylene and polyolefin printed label and packaging film. Typical application include glue applied beverage and bottle wrap packaging.

A high gloss UV flexo topcoat, FT35HG, is another launch at the show.

CPFilms Inc.

The Precision Coated Films Division of CPFilms (unit of Solutia Inc.) will display application samples of its full-service film enhancement capabilities. These processes include: deep-dyeing (colors and/or UV absorbers impregnated into the matrix of the film), vacuum metallizing (aluminum thermal evaporation and sputter coating) and coating and laminating, including ClearSil brand specialty silicone, non and low extractable silicone, and fluorosilicone release films. Any of these processes may be combined to meet industry specific requirements. For development of new materials, pilot coating services are available.

Austik

Introduces the Diamond-1350, the newest addition to its line of label laminating and finishing equipment for converting digital or preprinted labels on demand – in widths to 13". The new D-1350 can run inline with digital presses and printers or can run roll-to-roll with labels preprinted on digital or flexo presses or printers, converting webs to 13.5" at speeds to 40' per minute. A unique rotary cutting system will cut 1" to 18" long labels using only one cylinder.

All Austik equipment reregisters, laminates, die cuts, strips waste and converts printed labels into finished rolls. Featured will be the Diamond-10 for labels to 10" x 12" and the Mini-6 to 6" x 6".

For use on Austik and other label equipment, the company presents its FilmLOC specialty synthetic label stocks and laminates, coupon stocks, performance constructions and electronic imaging products and Clear Advantage self-wound laminations.

Inteplast Group Ltd – AmTopp Division

Will present a range of products including BOPP films for laminated roll-fed and surface-print cut-and-stack labels and two antistat-modified thick films- suitable for sheet-fed litho printing of cut-and-stack labels.

Ashland Specialty Chemical Company

Shows adhesives range for demanding label applications from durable label and pharmaceutical to household automotive chemicals and personal care.

Gombau Autoadhesivos

Will emphasize new synthetic products including Label Drum, a white matt top coated OPP film, specific for drums and chemical container labeling, and Secur Label UD, a film based on a new security concept.

Alpha Lasertek

Shows its range of hologram labels, including customized self-adhesive tamper-evident high-security holograms in sheet form as well as in spool form.

Also displays holographic hot stamping foil, with both registered and unregistered image variants, scratch holograms and holographic shrink sleeves to protect branded drinks against counterfeit and refilling.

AMAGIC Foils

AMAGIC Foils introduces its exclusive foil mock-up service, along with full range of cold and hot stamping foils including numerous colors of metallized foils, decorative holographic patterns and security foils, with the capability of originating custom holograms.

Kurz

Will be highlighting its cold stamping foil process, decorating a label using its Light Line Designs holographic cold foil on a web FB2500 rotary flexo 6 color press from Nilpeter. Also being produced in the booth will be a hot stamped foil label produced on a DMS machine.

Nakai International Corp

Nakai International Corp is the manufacturer of high quality metallic hot stamping foils. Nakai will be displaying new products specifically designed for the label industry. These products include: foils with print-over capability when used with UV silkscreen inks, high-speed foils for rotary hot stamping applications and products designed for cold foiling. Also on display will be the latest edition of Nakai's color chart, which contains all of the new metallic colors.

Rayven will exhibit specialty release liners including 'Any-Pak'

Western Decorating Technologies

The company is the newest foil supplier to the label industry, and introduces its Foil Specifier, which will be available to qualified individuals on the booth.

Cham Paper Group

Cham Paper Group introduces its Adhesa Unique grade, a one-side double coated self-adhesive paper combining special optic and haptic effects. The paper is unique in being structured and coated. Cham says the print quality is high and excellent metallic effects can be achieved via hotfoil stamping, with the grade's structure providing a high degree of anchorage.

Manter

Manter shows its different label paper collections including the exclusive 'Luxury Gourmet Label Collection', the 'Wine & Spirit Label Collection', and the 'Digital Label Collection' for HP Indigo technology. These all incorporate the company's own SH-3020 Plus adhesive which is specially suitable for labeling on glass.

Hanita Coatings

Hanita Coatings, will be showing a range of white, clear, metallized, matte and glossy polyester and BOPP films, topcoated for printing by conventional and digitalized printing systems. A wide variety of laser etch and tamper evident films will be on show, together with Hanita's RFID tag antennas, and heat stabilized, topcoated PET for printing of RFID antennas by conductive inks.

Rayven

Rayven will exhibit a range of products including Inkjet printable durable label and tag stocks – designed for inkjet wide format, desktop and label printers; custom pattern and zone coated pressure sensitive adhesives, offered in stripes or complex patterns from both solvent or emulsion adhesives; specialty release liners including the 'Any-Pak' release liner.

Full Bond Tape Corporation

Taiwanese company introduces its label product range, including multi-layer logistic labels, multi-layer labels, squeezable labels, security labels – including holograms, destructible, and fluorescents – high tack removable labels for non-polar surfaces, RFID labels and special top-coatings for digital printing on the HP Indigo press.

Pantech Tape Co., Ltd

Shows products including clean room grade PET release film, hard coat film, anti-scratch membrane/panel protective film, antistatic film and anti-glare film.

Spinnaker Coating

Spinnaker Coating will launch 40# Semi Gloss, a sheet displaying the flexibility required for tight radius applications especially useful in the pharmaceutical market; SafeTE Synthetic tamper evident film, and EarthFirst PLA film. GPR general purpose removable adhesive, and Frostbite, an aggressive freezer grade hot melt, will also be featured.

Dow Corning
Dow Corning will introduce new additions to its Syl-Off Advantage Series at Labelexpo. The Advantage Series is a line of low-platinum, solvent-free coatings claimed to provide robust cure below 35 ppm platinum, and to exhibit low misting with good coverage.

Wasau Coated Products
Featured products at Labelexpo include dry erase magnetic and dry erase ultra-removable products, inkjet printable magnetic, premium inkjet photo quality pressure sensitive, as well as an expanded and comprehensive line of film and paper products suitable for HP Indigo Digital Presses.

Japan Pulp & Paper Corporation
Shows its range of direct thermal papers, inkjet papers, color laser papers and other imaging media.

Wenzhou Imp. & Exp. United Co. Ltd
Will be exhibiting hot stamping foil; silicone coated release PET film; silicone coated release PP film; silicone coated release LDPE film; solvent-free silicone coated release PET film at the event.

Jiaxing Haoneng Packing Co.
Introduces to the US its range of self-adhesive clear labels.

Saint-Gobain Performance Plastics
Saint-Gobain Performance Plastics introduces seven new film products for the label and converting market, including Polyimide label stock, an overlaminate film, heat transfer decal liner with anti-block coating, FLuoroSilicone release liner and an easy release, non-silicone coated release liner.

Craig Adhesives & Coatings
Craig will be highlighting their latest coupon products such as 3992R50 adhesive with 1091X UV coating and 3255XM one-part aqueous adhesive. In addition, Craig will be displaying their 1070REL2 UV free radical release coating and numerous UV and aqueous adhesives to create 'multi-panel' booklet style labels.

National Adhesives
National Adhesives' Pressure Sensitive Adhesives group will be exhibiting two clear adhesives for labeling beverages and other consumer products. A new hot melt is targeted for integrated printing/converting label manufacturers that want to coat, print and die cut their own substrates. The hot melt works well at low coat weights and high line speeds. Another adhesive for labels is a waterborne water-white, clear product for the coater/laminator. Both options deliver environmental advantages because there are no solvents to be treated or disposed.

Omnova Solutions
Will highlight a range of products including removable PSA and laminating adhesives, as well as silicone and non-silicone release coatings for paper and film applications.

GBC
Demonstrates its extrusion coated heat activated adhesives for both films and papers, particularly for the IML and PSA label industry.

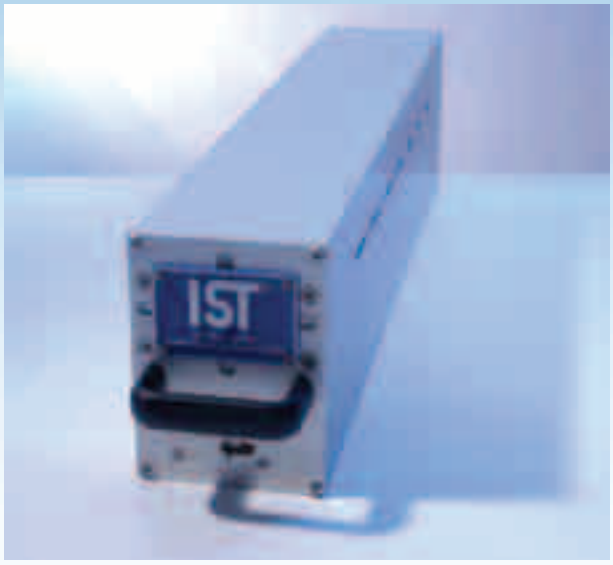
Chemque
Chemque launches a compact manufacturing line with a Vision System and 1-component, mercury free resins that cure instantly and are ideal for doming and molding applications, and for backfilling chromed 3D emblems.

Colacril Produtos Adesivos Ltda
Showcases its ADC1000 adhesive, optimized for low temperatures, for applications such as freezers and frozen products, and where humidity and condensation are issues. It still presents high tack and final adhesion on multiple surfaces at room temperature.

Nordmeccanica
Focus will be on two-ply laminators suitable for the label industry: machines developed for water based and/or solvent free adhesives. Other products presented include coaters for PSA adhesives as well as special coaters developed for UV and EB curable coatings and adhesives. Presentation will include multi-ply laminators in one pass, machine suitable to apply coatings of different nature in a single pass with significant production cost advantages.

Contract Converting, LLC
Contract Converting promotes its Roll Express program, which offers a large inventory of quality, non-pressure sensitive tag and label stock that is ready for custom slitting and shipment within 24 hours. Materials include flexible packaging, white/clear films, synthetics, PVC, HDPE, PET, coated and uncoated papers and tag stocks. New grades include Igneous, Tundra, Trilogy and Propel.

Imass
Imass, Inc. will be introducing its new Slip/Peel Tester SP-2100 which is a successor to, and a direct functional replacement for, the widely-used Imass SP-2000, which has proven accuracy, reliability and acceptability of test data.



(left) The new MBS-5 UV curing system and (right) the ISO-cure system from GEW

Additional features include extended data archiving, setup saver to expedite test changes, and entrylink2 software to log and plot data in Excel.

UV equipment

IST

IST is presenting its latest UV curing system for the narrow web market. The MBS-5 incorporates new developments in reflector geometry and integrated URS technology, allowing the MBS-5 to produce curing results using much lower power UV lamps, according to the company.

GEW

GEW (EC) Ltd will unveil ISO-cure at Labelexpo Americas, claimed a new concept in UV curing with fully water-cooled reflector profile designed for processing a variety of substrates on presses in the mid and wide web range, from 450mm (18") to 1450mm (57").

ISO-cure features the energy saving, e-brick electronic power supply and new lamp reflector design from GEW with all electric shutter operation for maximum performance and cure efficiency.

Managing director Malcolm Rae commented: 'The design of the reflector on the ISO-cure is similar to that of our new XC reflector, but has a specially developed glass dichroic surface that enhances UV output whilst maximizing the absorption of IR. Research has shown that this reflector construction gives the best performance for optimizing the ratio of UV reflection to IR absorption. Additionally, the life of the reflector has been shown to be maximized, further reducing operating costs.'

ISO-cure options include an inert gas atmosphere curing system, UV monitoring on-line or through a docking station with hand held monitor and a dedicated refrigeration system.

The company will also debut its new e-system Mini electronic UV lamp head featuring an e-brick 3.6kW electronic power supply suitable for use with standard single phase factory outlets for maximum flexibility and use of space. Complete with new XC cassette 'extreme cure' focused reflector, the lamp head is optimized to provide ultimate UV performance for press widths up to 250mm (10"). The latest versions of the vCP lamp head for web widths up to 450mm (18") and eCP for web width up to 700mm (28") will compliment the e-system series.

Also new from GEW is the Mini Laboratory Unit for curing UV inks, coatings or adhesives that provides the ability to work away from the production line to produce or test small lots or sample preparations on a variety of substrates. With a working width of 150mm (6") the Mini Lab Unit is a stand-alone, bench top UV curing system for laboratory or low volume production environments and also features the new XC cassette 'extreme cure' focused reflector from GEW with the option of 80W/cm (200W/in) or 120W/cm (300W/in) UV lamp.

Aetek UV Systems

Shows the Aetek Ultrapak handling UV inks, varnishes, laminating adhesives, and coatings. The modular cassette design is fully interchangeable from print station to print station, providing flexibility to cure different locations throughout the

Prime UV demonstrates UV curing equipment

press. The Ultrapak can be supplied with new presses, through the OEM, or as a retrofit on existing machines.

XericWeb Drying Systems

XericWeb Drying Systems' booth will feature two new products: its next generation ultraviolet curing system and combination infrared drying/ultraviolet curing system. The combination irAIR/xeriCURE system 'reduces the tangle behind the press' with a single exhaust duct.

Prime UV

Prime UV demonstrates UV curing equipment for all converting, coating, adhesive and laminating applications; MiniScan 3C UV processor for all narrow web – tag and label applications, Nitrogen Inert curing chambers for silicone release & PSA coatings, FLEXfilm UV processors for curing UV inks and UV coatings on flexible films, Optimum Series UV curing systems for film laminations. Smart 2100 Control Platform provides superior control of the UV curing & IR drying processes.

RFID

Acheson Electronic Materials

Shows conductive inks specifically formulated for RFID designers optimized for fast curing, low VOC, and solvent sensitive substrates when printing UHF antennae. Inks are designed for screen printing, flexographic and rotogravure high speed printing applications.

Avery Dennison RFID

Will unveil its latest inlay products for supply chain, item-level and asset tracking applications and demonstrate a broad range of value-added service/support programs, highlighting the applications engineering and test teams at the company's Atlanta Technical Center.

Confidex

Confidex, exhibits the MR01 testing system for UHF & HF RFID inlays and labels. MR01 is claimed the first industrial testing and coding system in the market to offer quality control for the manufacture of RFID labels.

Muehlbauer

Muehlbauer demonstrates a complete turnkey solution for RFID Smart Label production including test equipment to guarantee best quality. The system runs from raw materials like antennae, RFID chips or adhesives over straps and smart inlays to the finally finished converted self-adhesive Labels, tickets or contactless cards.

Atlantic Zeiser

Introduces its new Tagline high-speed system for RFID smart label personalization, offering a broad range of possible uses. It has been developed for simultaneous optical (OCR/barcode) and RFID encoding, and with label selecting capability. Contactless label encoding at up to 40,000 labels/hour with 100 per cent verification and complete inline process control.

The company's Smart Label Production Line SL-400 (four tracks) features an output up to 40,000 labels per hour on paper, PET, PP or Tyvek, other materials on request. HF, UHF or Microwave transponders coming from various suppliers like Texas Instruments, Omron, Philips, Infineon, Alien, Rafsec, KSW, Hitachi and Symbol can be processed.

The machine has patented on-line transponder selection, meaning only good transponders are processed. The production lines integrate punching units, trim removal and rewinding equipment and are expandable by further modules.

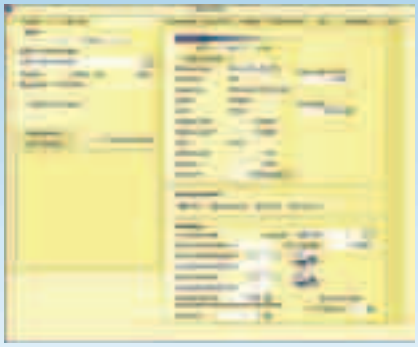
Schober USA

Schober USA will unveil its STP (Smart Tag and Ticket Processor), which incorporates the company's second Generation RFID technology with the ability to read HF, UHF and EPC GEN 2 tags. The STP product line is ideally suited for contactless readable tickets for public transportation, entrance/access authorization, security identification, and airport baggage tracking tags, pallet and case tracking, asset and supply chain management, and more.

bielomatik

Introduces a new HF and UHF editing machine for 100 per cent qualified Smart labels.

The Qualifier T-165 is a high-speed solution for Smart label testing, defect removal, replacement and encoding, which tests,



DiMS! introduces a new estimating wizard (left) and Label Traxx version 5.0 has a revamped user interface (right)

removes and replaces defective labels at production speeds of up to 200 fpm (60m/min). Chip encoding is available.

Tapes

tesa tape

tesa tape show a complete range of foam-based plate mounting tapes for all types of label printing, including tapes designed for plates that print full tone images, plates for lacquering, and plates for embossing high quality labels.

As a complement to its plate mounting tape line, tesa also offers tapes with silicon surfaces for roller wrapping, single and double-sided tapes for splicing and end tapping, and a cleaning device to make dust removal from plates much easier.

MIS

DiMS!

Launches its latest MIS release for the label industry, DiMS! 700. New features include: extended functionality of the proactive 'iDiMS!' Today' workflow page; an 'Advanced Production Tracking' (APT) tool that provides complete tracking of all production material whether raw material, finished goods, or WIP inventory. APT's tight integration with the DiMS! scheduling enables real- time visibility across the entire business of job status, time usage and inventory. A new estimating and pricing model dedicated to the label industry, the Label Estimation Wizard, is available. It offers a fast way to create label estimates and quotes, and includes contract management.

Tailored Solutions

Tailored Solutions – the producer of Label Traxx print business software for flexographic narrow web converters and printers – will introduce Version 5.0 of its popular Label Traxx software. The new program includes a totally revamped user interface, enhanced order entry workflow, and enhanced connectivity to various digital printing presses. The new software version runs native under the Macintosh OS X and Microsoft XP Pro operating systems.

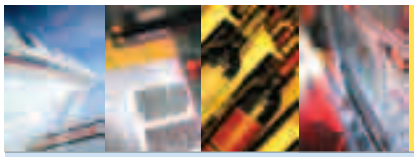
CPS

Demonstrates its Flexographic print management and supply chain management systems.

Print and apply

PowerForward Inc.

PowerForward Inc. will be demonstrating its new PowerStick in-line label applicator which is designed for any high speed web process. This patent-pending device utilizes servo motors and unique slide plate to permit the accurate affixing of any PS item onto webs moving up to 3,000FPM. The PowerStick can be used on label presses to permit label-on-label construction at more than 75,000 labels per hour, or any printing, direct mail or flexible packaging application.



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COMPLETE UV SOLUTIONS

Datalase unveils its laser solution for pack marking (left) and Seagull Scientific shows the latest version of its BarTender Windows label program (right)

Appleton

Appleton will demonstrate its latest direct thermal labelstocks and look at RFID versus other printing technologies for supply chain management.

Tharo Systems Inc.

Tharo Systems, Inc. will introduce its new PA1200DT Dual Tamp Label Printer/Applicator. This new multi-function Printer/Applicator can print and apply labels to two adjacent carton/product surfaces – front and side, front and top, corner wrap or a simple front apply. The PA1200DT was designed, engineered and built by Tharo Systems and is currently available using the Tharo H-Series thermal/thermal transfer printers with print resolutions of 203 or 300 dpi.

Sony Chemicals Corporation of America

Promotes its TR4085plus resin-enhanced wax thermal transfer ribbon, featuring an ink formulation that virtually eliminates static which could damage sensitive RFID circuits.

UCA

Union Chemicar America (UCA) has introduced US140, a premium thermal ribbon designed for mission-critical RFID printing. US140's unique composition dissipates static and will not hold a static charge. UCA recommends users work with a knowledgeable smart label converter utilizing proper static dissipation processes, along with US140 thermal transfer ribbon as the best defense against static in the thermal printing process.

US140 prints at high speeds, up to 10ips, provides excellent optical density, and offers good scratch/smear resistance. It is compatible with a wide range of receiver materials, including coated/uncoated papers, synthetics, and many thermal receptive film stocks.

DataLase

DataLase (formerly Sherwood Technology), originators of the DataLase process, unveils its solution for outer case secondary packaging, DataLase Casemark.

Ricoh Electronics Inc.

Features a newly improved Direct Thermal Paper for high quality barcode printing, with high resistance to scratch, smear and heat and suitable for high speed printing. Also premiers Run-a-Splice, which allows the user to maintain press speed while running and printing through the splice, with no lost material due to re-splicing and re-working rolls.

Fujicopian

Fujicopian, a leader in specialty thermal transfer solutions, will be highlighting its latest product introduction: Thermal Transfer Laminating Film (TTLF). TTLF allows users of color ink jet printing to enter the world of industrial labeling applications where today the solution set of media is limited or non existent. Also on display will be Fuji's wide array of specialty products: Resin/Near Edge TTR, FIXFILM, Flexible Packaging TTR, Certified Ribbons for UL/ISEGA Applications and an extensive array of color thermal transfer ribbons.

Labelmate
Unveils a new line of Reel-to-Reel Counters. The RRC-250 and RRC-330 handle roll diameters of 10" and 13" respectively, and incorporate unwinder, 6-digit counting, and rewinder functions in a single convenient, low-cost unit. Both models offer simple operation and an option to not only count labels but also make linear measurements for use with other materials.

Seagull Scientific, Inc.
Shows the latest version of its BarTender Windows label program, which provides full layout control of barcodes, text, and a variety of symbols and graphics. Encoding of RFID 'smart labels' is supported on capable printers. Features for integration with supply chain, ERP and other software include powerful queries, versatile data access, and Active X Automation for remote control. Available in 20+ languages.

Clements Industries
Tach-It division of Clements Industries, Inc. will be exhibiting a full line of semi-automatic, mechanical, special application and hand-held label dispensers. Of special interest is the Model #SH404TR semi-automatic label dispenser which uses non-contact optical readers to read the label. Perfect for transparent or opaque labels, the SH404TR can dispense almost any die cut or butt cut label. Other items include the KL series of semi-automatic label dispensers which utilize non-contact photo-sensors, bottle labelers and L-Clip label applicators.

Magnum Magnetics
Magnum Magnetics will be showcasing its LabelMag flexible gap magnet (patent pending) designed to run efficiently on most automatic labeling machinery. It is available in roll lengths up to 400 ft. depending upon the magnet thickness and features a permanent indoor adhesive and tear-resistant liner for problem-free application. Other Magnum flexible magnetic materials on display will include magnetic strip, magnetic card channels, and DigiMag PAPER printable magnetic sheets for dye- and pigment-based inkjet printers.

Ink and varnishes

Alden & Ott
Features the new Galaxy hybrid ink system for paper, foil and film claimed to have superior open time, color strength and a very low viscosity. Galaxy inks work well on both analog and digital plates without losing color strength or dot formation. The company's Multi-Shrink ink system is designed to run on all shrink films that converters are running today.

XSYS Print Solutions
Featured will be a comprehensive product offering including UV and water-based flexo, UV screen, letterpress and offset ink systems for labels, tags, folding cartons and flexible packaging applications. New ink systems featured include Hydrokett Prime, Flexocure Ivory, Lithocure 3G, and Uvoscreen OPQ

Siegwerk
Shows ink chemistry for all print disciplines for the label market including UV flexographic, water-based flexographic, UV rotary screen, UV letterpress, UV offset and gravure inks and coatings as well as related point-of-use services including ink room management, dispensing equipment, and color management training and equipment.

Water Ink
Water Ink Technologies introduces new water-based and UV ink systems for shrink film applications. Each system provides converters with high graphic quality, fast production speeds and excellent shrink performance on all of the widely used shrink film materials, says Water Ink. Converters can now combine water-based and UV inks to obtain the best features of each ink system. Shrink film converters can enjoy the economy of water-based inks with the opacity and sleeving efficiency of UV inks.

INX
Demonstrates its latest shrink sleeve label inks, ShrinkPac (gravure) and Flexo ShrinkPac inks – specially form ulated for polystyrene, PVC and/or shrinkable polyester, and claimed to exhibit exceptional film adhesion, high-speed printability, scratch and scuff resistance.

Fujifilm Sericol
Fujifilm Sericol will be featuring its new Uvisleeve UV flexo shrink label ink along with other key flexo and rotary screen products and services.

Braden Sutphin Ink Company
Three products will be featured at LabelExpo '06: the 'All Substrates' flexo ink line designed for both paper and film, reducing the printers need to carry multiple lines; a low cost introductory ink dispensing system; and the 'Fast Film Bond Graphix' ink line designed for 1000+ anilox, high speed film printing.

Lipo Technologies
Promotes its TransluScent Flexo Varnish, a water based flexographic varnish containing fragrance microcapsules. When you print the varnish onto a substrate it results in a scratch and sniff or rub and smell type of effect. The company can encapsulate virtually any fragrance and incorporate it into the varnish, adjusted to different viscosity specifications and shipped press ready.

Labelshielder
Labelshielder will show added functionality of coating – fragrance, UV glitter, pearl and bichromic, soft feel and glow in the dark on short run labels.

Graymills
Graymills will add to its peristaltic pump line with the introduction of the new Removable Head Peristaltic Pump, where the head can be removed in seconds to facilitate quick press changeovers. This feature can also be used during press cleanup when hose maintenance is performed. The removable head feature can also be retrofit to all Graymills splash resistant peristaltic pumps produced since January 1, 2005. The pump already features a forward/reverse switch for pumping to the press or back from the press; and a variable speed motor to control the rate of ink or fluid flow.

Harper
Harper introduces its Platinum XLT Anilox and Coating Laser System, a result of three years' intense research and development, and claimed to create levels of performance and line-screen counts unachievable with current laser and ceramic surface technology. Also shows HarperScientific division pressroom supplies.

Dies

RotoMetrics
Showcase its latest narrow web tooling products including the RD200 machine-finished dies, as well as adjustable clearance anvils and multi-port air-eject dies. The company introduces its MyRoto.com on-line ordering and tracking tool.

Apple Die
Shows range of products including flexible magnetic dies, rotary dies, steel rule dies, magnetic cylinders, anvils and printing cylinders, and introduces proprietary flexible die finishes which can extend the life of Apple's flexible dies from 3-10 longer than its standard flexible dies.

Bunting Magnetics Co.
Showcases all of its printing products, including Impression Series magnetic embossing cylinders, Gold Series magnetic rotary hot stamping cylinders, and X-treme Series die-cutting cylinders.

Gerhardt
The company has planned its stand around the choice between solids and flexible dies. There will be laptops with a calculator running to determine how much customers could save by switching to flexibles. There will also be packs to hand out with illustrations of possible savings.

Kocher + Beck
Demonstrates laser hardened flexible dies for flat and rotary applications, magnetic cylinders and magnetic flat bases for all narrow web and printing presses as well as complete range of rotary tooling and the latest version of the GapMaster.

Electro Optics
Electro Optics offers three basic grades of flexible dies for applications including demanding film label stock. Electro Optic's DURA Line Dies improve the longevity for difficult and highly abrasive label stock. Shows its patented Electro Optic Die Repair Tool.

T.D. Wright
Will show its patented Modular magnetic, 100% Rare Earth cylinders in a diecutting demonstration. The Modular magnetic cylinders are guaranteed to hold dies tightly without slipping. TDW Cylinders are precision manufactured to fit in any die unit/press/CTP unit and work with any dies/plates.

General Metal Engraving
Will demonstrate its vacuum rotary die system for removing die-cut waste from the web. Methods of perimeter and vacuum hole-punch cutting on one die at feeds of several hundred feet per minute will be presented. Also on display will be male-female folding-carton dies and standard rotary tooling designed for long-run label production.

ADT
Newly released system to automatically compensate for changes in die cutting pressure, detect material wraps and instantaneously stop the press in mili-seconds as well as automatically maintaining the pressure equal on both sides of the web throughout press run.

AB Kelva introduces its CWC contact cleaner (left) and Enercon launches its Compak 2000 power supply (right)

DMS
Features the FR Series high-speed hot stamping system, patented Web-On-Air silent air bar and turn bars, ColdPocket continuous surface rotary hot stamping/heat sealing dies, TorKit electronic die pressure monitoring system, and rotary texture embossing dies.

Web treatment

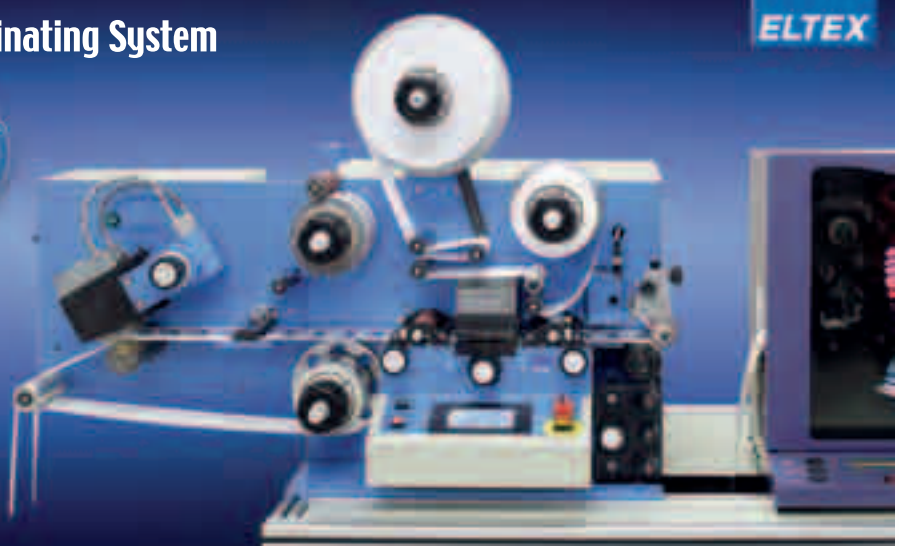
Polymag Tek Inc.
Polymag Tek Inc shows its oscillating 6 roll web cleaner with clam shell and tape drawer slide, three roll sheet cleaner, two roll narrow web cleaner, hand rollers, tacky pads, and adhesive tape rolls.

Kelva
Presents its CWC contact cleaner based on 50mm polymer rollers for web speeds up to 300m/min and web width from 250mm to 550mm, including pull-out function for side access to the adhesive rollers. Also shows the CC-Plus Corona cleaner, providing a combination of web cleaning, corona surface treatment and static neutralization.

Simco-Industrial Static Control
IML – The Chargemaster CM power supply is specifically designed for applying the electrostatic charge for label placement in IML (in-mold labeling) injection molding applications. The Chargemaster CM features remote control capability that is critical for automated processes that include robotic and end-of-arm tool equipment functions, plus the new touch-pad controls and sealed design that make it compatible with virtually any environment.

RFID – The R-50 Blue Bar/TrueAC power supply provides extended range static control, while providing diagnostic data on the status of the system, to protect the ESD sensitive 'chips' used in RFID tags.

Husson
The company distributes ML high-pressure humidification units, helping solve static electricity and production problems associated with dry air. Self-contained Reel-to-Reel Counters debut.



Vetaphone
Exhibits its Corona-Plus equipment for narrow web applications, incorporating the Quick-Change-system. New is a special coating which makes it easier to clean the Corona station, and will lighten the maintenance process in general.

Pillar Technologies
Pillar Technologies, an ITW company, will demonstrate both the 'unitized' (pre-assembled and pre-wired) and 'non-unitized' designs in narrow web surface treatment equipment. Equipment can be provided single-side or two-side treat with web cleaner and/or static control as add on options.

Static Clean International
The company's latest BR4400 Static Bar is a sturdy rigid extended range double bar. Each static bar contains two parallel rows of pins to offer maximum efficiency in static control. Since the static bar can be mounted up to six inches from the target material, it is perfect for close up removal of static charge without interfering with normal operation

Enercon
Enercon will introduce a new Compak 2000 power supply with an advanced graphic display interface. The new system simplifies installation and operation by integrating many functions such as Watt Density Control and Station Diagnostics with standard operations into a single operator interface. The new interface also offers data logging and supports multiple languages for Enercon's customers around the world.

The new system provides power to Enercon's compact and powerful TL Max which is ideal for narrow web applications. And power to Enercon's Universal-roll station with ceramic electrodes for midweb and larger applications.

Inspection and slitter rewinding

Rotoflex
Rotoflex International Inc. will demonstrate its next generation digital web finishing technology. The new Configuration 2 Vericut includes the latest advancements in semi rotary spot coating, cold foil, hot foil and embossing.

Also on the stand is the Rotoflex Model HTI, a computer controlled bi-directional processing machine for the automatic, high-speed verification and certification of products such as pharmaceutical labels and leaflets. The security machine family also includes the Rotoflex Model SPI for single pass inspection. Rotoflex will also display the latest developments in inspection, die cutting and advanced vision integration technology from vision partners AVT and Nikka Research

Arpeco
Arpeco will exhibit several machines from its Tracker and Premier lines of finishing and converting equipment – all with new look stainless steel tables and silver control panels. An Arpeco Tracker Premier model will highlight various tension control and inspection capabilities with AVT Helios 100% Vision Inspection Systems installed both in-line with the rewinder and in an electronic workflow link to a Gallus press. Motor drive technology, converting capabilities including the patented Quickload die station and a new Color Touchscreen Operator Interface for the Dynatrak count and control system will also be featured.

AB Graphic International
AB Graphic International will be showing the latest models from its Digicon range of converting lines with emphasis on wine label converting and sheeting and stacking of finished labels.

The company will show three of the latest models from its Vectra range of turret rewinders running in line with Omega unwind and blank label converters. Featuring will be the Vectra ECTR model with closed loop tension, glue-less roll production with the SGTR model and the new entry level Vectra LCTR system made to a fixed specification and ideally suited for standard self-adhesive label production.

An inspection rewinder from the company's Omega range equipped with a Flytec 2000 Vision System for 100 per cent pharmaceutical label inspection and rewinding will also be introduced along with an SR1300 slitter/inspection/rewinder with the latest Helios camera full web visual inspection system from AVT.

Visitors will also be able to see the Omega Ti150 RFID and converter designed to permit radio frequency identification (RFID) or electronic article

surveillance (EAS) inlays to be incorporated into a pre-printed and die cut, self adhesive label. The Omega Ti150 Converter takes the rolls of finished, pre-printed and die cut self-adhesive labels and integrates almost any type of electronic inlay in a sandwich between the label substrate and its backing paper. The primary label is dispensed from the reel creating a finished sandwich of label, electronic inlay and backing paper.

Also featuring will be an Omega Digicoat 1300 a purpose built coating system for priming and coating of master rolls of label stock in preparation for subsequent digital printing, a GM ETV 330A off line sheeter and a PNTS160 automatic core cutter.

Smag Graphique

Labelexpo Americas will see for the first time the Digital Galaxie. Specifically designed to run inline with the HP WS4050, this equipment combines flat bed silk screen with flat bed Hot Stamping, Embossing and Die Cutting along with Semi Rotary Hot Stamping, Embossing and Die Cutting. Also on Display for the first time in the USA is the Galaxie Duo, an entry level machine which brings high quality flat bed silkscreen within the budget of more label printers. Smag Graphique will also display its full range of Inspection slitting rewinding and converting equipment.

DCM

Shows its new Sleevecut high speed cutting machine for sleeves and labels. Up to 400 pieces per minute, registered cross perforation, table, belt or rewinder, for finished product delivery, are the possibilities. The system offers two speed ranges, of 400 and 550 m/min.

CTC

CTC demonstrates its latest coreless/glueless rewind technology, an improved butt splicer, next generation automatic matrix winder, and a system for inserting finished rolls from turret rewinder, directly into boxes.

Complete Inspection Systems

Demonstrates a number of new systems. AccuProof Pro Merlin System is an automated imaging system that allows users a fast method to automatically proofread and verify label copy versus PDF or other masters. The AccuProof Bar Code Verification System, a camera-based automated bar code reading system, allows users the ability to scan and match codes on line. Users can set the level of quality that they will allow to pass during the production process. AutoProof Pro Imaging Suite in its latest version allows users the ability scan and compare materials and press sheets up to 54 (137 cm) x 54 (137 cm) inches in size.

New anti-counterfeiting technology includes several new products including an infrared camera-based bar code verification and ARmark, a unique nano marker that can be added to foods, drugs, etc.

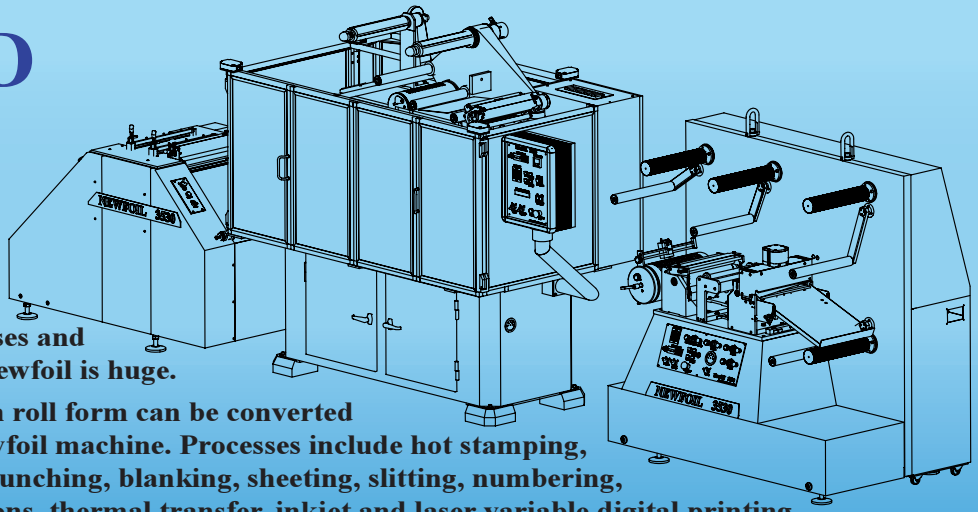
Lederle Machine Co.

Lederle is a manufacturer of rotary die-cut tooling and label inspection machines and will display both the model 700 series label inspection rewind tables and a broad range of narrow web rotary tooling. The rewind tables feature quick-change removable aircores, Multi blade web slitting system, Automatic strobe light, individual and incremental label counters. Integration such as ink jet, RFID verification and barcode scanning devices are also available.

Scantech Automation

Shows the Printrack line of flexible format web inspection slitter/rewinders, which can be configured into a range of systems including Combitrack and Securitrack. To a structural backbone can be accommodated various machine widths, unwind and rewinding capacities and a wide variety of options, to create anything from a basic machine to one that is sophisticated enough to run high security inspection or unsupported films.

NEWFOIL MACHINES LIMITED



Newfoil is more than the worlds leading manufacturer of quality hot stamping and die cutting label presses. The list of special processes and options available from Newfoil is huge.

Any material available in roll form can be converted for added value on a Newfoil machine. Processes include hot stamping, embossing, die-cutting, punching, blanking, sheeting, slitting, numbering, multiple laminating options, thermal transfer, inkjet and laser variable digital printing in four colours, holograms, heat-sealing, heat embossing, RFID insertions, various security solutions…. The list is endless.

If your business operates in the printing, electronics, pharmaceutical, food, drinks, packaging, toiletry or cosmetics industries and you have products that start in roll form, we can help to improve your productivity. Contact Newfoil Machines Limited

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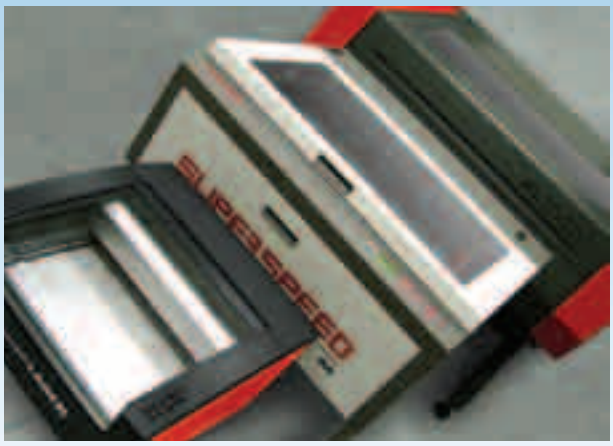


Universal laser systems shows its CO2 and YAG laser marking and cutting systems

Advanced Vision Technology

A live demo of PrintVision/Helios, 100 per cent Automatic Inspection solution for rewinder and press applications, will be presented at the AVT booth as well as at various partner's booths throughout LabelExpo. PV/Helios will be equipped with both new and established modules such as the new MasterRef module, providing Master Verification during setup, the Reflective Support Module for inspecting highly reflective material, and the PrintFlow Manager, for managing quality information from the manager's desktop computer. WorkFlow Link will also be demonstrated, offering a bridge between press and rewinder, enabling efficient defective-material removal using on-press defect detection data.

BST Pro Mark

BST Pro Mark will show for the first time in North America, two new inspection systems: Shark and Premius LeX.

Shark was designed for use on a re-winder or narrow web press and features a unique defect management software package, an all icon driven user interface for greater ease of use, unique (patent pending) lighting technology, and image acquisition that is claimed 50 per cent faster than competitive systems.

Shark will perform 100% inspection of webs up to 500mm, identify missing print, reverse type fill-in, splash, spots, mis-register, hickeys, dirty print, web crease, haze, scumming, smudges, streaks, hairs, die-cut variations and incorrect matrix removal. Shark will effectively identify random and repeating defects and is suitable for use on all kinds of substrates, including highly reflective materials.

Designed to bridge the gap between inspection systems which sample the web and those that perform 100% inspection, PREMIUS LeX combines the advantages of both technologies into one comprehensive print inspection system. It performs automatic print defect detection on the entire print repeat about every second and a half, monitor color in CIElab to a tolerance of ±1.0 delta and verifies bar codes to international ISO or ANSI specifications.

The converter can document the entire quality assurance process and generate roll or job reports. Standard features include positional memory, quick zoom and Electronic Loupe.

PC Industries

PC Industries will introduce the new Viper Off-line Scanner PDF Proofing System along with the RX Series digital print detection systems. These systems can be installed on printing presses or inspection rewinders to provide 100 per cent print defect detection. Features include 21CFR Part11 compliance, audit trail documentation, 2D bar code reading, OCV sequential number checking and color monitoring. Other equipment on display includes ANSI bar code verification, repeat length monitor, automatic register controls and strobe lights.

Erhardt + Leimer

Erhardt + Leimer Inc. will introduce its Nyscan family of inspection workflow solutions.

Demonstrations of the Nyscan Web:Inspector:2 will showcase its defect detection and color management capabilities for on-press and finishing machine installations. Image:Inspector:2 will be in use to verify the reference image against a valid PDF file from pre-press. Nyscan's Roll:Scheduler's ability to place defects on the finishing machine using defect data collected on-press will be showcased.

TruColor Vision Systems, Inc.

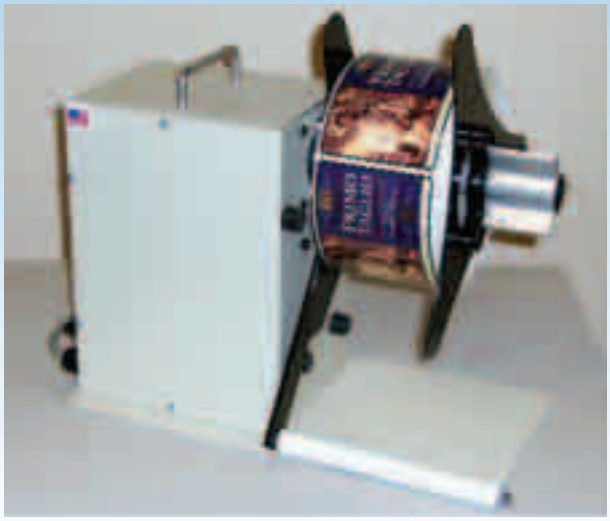
TruColor Vision Systems, Inc. will introduce the API 100, a true 100% inspection system for detecting all types of random and repeatable defects – on any web width – at any machine speed. TruColor will also the entry level 1000 Series, mid-range 2000 Series, and touch screen based TG4000 Series.

Nireco America

Is displaying five new process/quality control systems: the BCON3000NW 100% Print Defect Detection System featuring an on-line color monitor, holographic inspection, and zero color distortion; the On-Line L,a,b, Δe Color Measurement System; new register control systems include the MR5000EX for color-to-color control; and the CT5000 GC for auto die cut control. Engineers will be on hand to discuss tension control upgrades and turn-key retrofit installations.

Isra Surface Vision

Introduces the ISRA 100% Print Inspection System, which uses line-scan camera technology to inspect 100% of the label or



New stand alone rewind system from Take-A-Label

narrow web as opposed to sample inspection. Typical defects such as: spots, hickies, smears, creases, and miss registration can be detected on 100% of the web or sheet.

Lake Image Systems

Shows its IntegraScan real-time data verification for narrow web, label and ticket production. IntegraScan verifies data integrity of every label, ticket and narrow web document real-time during variable printing process. IntegraScan utilizes a single high resolution camera to ensure legibility, proper location and data accuracy of all variable data elements such as account numbers, pin numbers, sequence numbers and bar-codes while providing formal reporting to prove the integrity of production. Print Quality Detective provides print quality verification for continuous web printing

Finishing

Cartes

Cartes will present its Dual Laser 350/200W+200W laser die cutter, which thanks to its double laser source can cut, die-cut, kiss-cut and engrave many materials at high speed. Also on the stand the single laser version integrated with un-winder and re-winder.

Carter also shows one-pass label finishing machines operating at up to 12.000cycles/hour. The CE152FE, with a 150x150mm working area and the HS352SF, 350x250mm, can combine hot-stamping, overprinting, numbering, hologram application, lamination, traditional die-cutting, kiss-cutting, scoring, embossing. The HS190 modular system can also silk screen print and Laser die-cut.

Universal Laser Systems

Universal Laser Systems, Inc. shows its CO2 and YAG laser marking and cutting systems that are ideal for producing asset tags, property ID tags, tamper evident tags, bar code labels, heavy duty equipment plates, stencils, schematic panels, inspection stamps, custom signage and more.

AM Engineering

Introduces the Nexus laser system equipped with an automatic feeder, able to execute sophisticated and complex cutting geometries, kiss-cutting, microperforating and marking of digital and screen-printed labels from A5 up to A3++ format.

Nexus is equipped with the Nexus Vision adaptive system of artificial vision with self-learning, which gives the ability to adjust in a few seconds to a new cutting outline.

Epilog Laser

Epilog Laser is an industry leader in design of laser engraving, cutting and marking systems. It can permanently mark bare metals with 2D and data matrix bar codes, serial numbers and logos. Custom labels can also be created from AlumaMark, plastics, stainless steel, and many other items and can be engraved with bar codes, logos and serial numbers.

Rofin-Baasel

Rofin will demonstrate the latest in its family of label marking systems, the Label E Mini. The system is a benchtop turnkey laser label marker in a compact package, incorporating Rofin's own end-pumped diode technology for superior beam quality and pulse stability.

Take-A-Label

Introduces a new label rewind system The TAL-600R is a stand alone unit which offers a 6" web width, 12" roll diameter on 3" cores, and an automatic speed adjusting dancer arm.

Newfoil Machines

Labelexpo will be used to show several new techniques in micro embossing and foiling which are applicable to top end labels.

The latest addition to the Newfoil range is a digital printing system capable of four color process at 600 d.p.i. and spot colors by hot foil. The laser toner system employs a 'cool fusion' process, which limits the substrate temperature, is inexpensive in use and enjoys very low service costs, according to Newfoil.

Stanford Products
A leading manufacturer of shrink sleeve finishing equipment, Stanford will exhibit the SM-10 Seammachine and DM-10 Doctor Machine Inspector. The SM-10 incorporates a new, patent-pending solvent application system.

Karlville Development LLC
Karlville Development LLC demonstrates its latest solutions in shrink sleeve manufacturing and application. Recently the company opened a Technology Center situated in Miami to perform tests for inks, solvents, materials and shrink performance on any type of container.

Appleton Manufacturing Division
Appleton will be cutting 3 and 6 inch diameter cores using the patented Instant Diameter change tooling on their A301 core cutter equipped with an auto-indexing knife assembly. Appleton will also be demonstrating the industry's first battery powered RollMover designed to replace air powered movers.

Pre-press

Kodak
Kodak's Graphic Communications Group will demonstrate its latest CTP device for package printers. Available in narrow and mid formats, the Thermoflex Hybrid platesetter combines digital flexographic and offset platemaking abilities into one device, giving printers major flexibility for high quality printing on a wide variety of substrates. In addition the company will showcase its full portfolio of packaging solutions, including the Kodak Prinergy Powerpack workflow system, which helps users improve efficiency, reduce costs and enhance print quality.

Esko
Esko is partnering with DuPont and the Pitman Company to demonstrate a complete tag and label workflow, from ideation to flexo plate imaging. Esko will demonstrate its new Scope 3 packaging software, the Cyrel Digital Imager (CDI) 2120—a small format flexo imager for narrow web platemaking—and the Kongsberg XE10 samplemaking table, a robust, small-format dieless cutting table ideally suited for samplemaking for decal and other specialty print applications.

Stork Prints
Stork Prints will show its latest laser engraving offering, the Helios 6010, a single solution for flexo, rotary screen and letterpress printing formes but exclusively narrow-web uses. It has generated much industry interest, with several sales in Europe and Japan. At the booths of Mark Andy, Codimag and MPS Europe, live demonstrations of presses will be running, printing off plates engraved by this Stork system.

Stork will also be showcasing a wide range of products from AKL Flexo Technik, suppliers of conventional sleeves for plate mounting, seamless-endless photopolymer printing formes and, launched most recently, the patented OptiFLEX thin sleeve and adapter technology. Stork formed a strategic partnership with the company to offer a complete program of sleeves and ITR (In The Round) printing formes that are compatible with any printing plate, so that printers are not limited to the choice of a particular supplier of (photo)polymer material.

The company demonstrates various in-line screen options, including the RSI screen modules, RSI Compact units – with restricted repeat sizes ranging from 12" to 18", designed for the label / narrow-web sector – and the RSI EasyFit bespoke 'cassette' format modules for easy insertion into the mainframe of partner press manufacturers' machines. These are designed for presses that allow easy interchangeability between different processes at each station.

As well as its RotaMesh screens, Stork shows the RotaPlat cylinders which provide a reduced cost solution for non-Stork systems.

A special range of RSI units, ranging from 12" to 24" web-width, are available with hot air dryers for printing both High Frequency and Ultra-High Frequency RFID label antennae.

A new desktop ink dispensing system will also be launched at the show.

Carey Color

Carey Color is presenting a technology in prepress services regarding direct digital laser engraving (DDLE) of flexo and embossing (2D and 3D) plates and continuous sleeves, dry offset and rotary letterpress plates. The system features 'below surface engraving' of the high-light dots for printing finer resolution and smoother vignettes. DDLE can also control plate characteristics such as the shape of 'shoulders' and 'relief depth and height'. Lasers 'ablate' the non-image areas, eliminating multiple environmental issues. Samples will be available for demonstrating this technology.

Nu Tech Coatings

Nu Tech Coatings introduces Performance Enhancing Cylinders, a new technology developed exclusively for narrow web presses. A special surface coating is applied directly to a company's existing or newly manufactured cylinder. A PEC provides a mounting platform for plates that allows for impression, and absorbs vibrations that attribute to gear marking and banding. In addition to impression latitude, PEC's allow for plates to be mounted directly to the cylinder with .005 tape.

Keco Engineered Coatings

Keco promotes its non-stick liquids/powders, plasma, ceramic, and corrosion resistant coatings. The company also fabricates spare pans for the printing/packaging industries.

Rogers Corporation

Exhibits its R/bak SA 3000 cushion mounting tape, a product aimed at the 0.020" (0.51 mm) thin tape market, which is composed of primarily wide web flexible packaging printers. SA 3000 combines Rogers' proven open cell urethane cushion technology and specially developed acrylic adhesives in a product construction designed to handle easily.

Axicon Auto ID LLC

Axicon shows off-line and inline verifiers for barcode print quality for the Microsoft Windows and Apple MAC platform for use in pre-press environment and on printed barcode symbols. The current focus is on online verification of barcodes printed on on-demand printers.

Inspection Systems, Inc.

In response to demand for easy to use, high volume statistical ISO/ANSI methodology bar code inspection, Inspection Systems has announced the addition of a new Desktop model to its Compliance-Pro line of high speed bar code verifiers. Notable features include: High volume inspection over multiple production lines, and automatic storage of information in data base by date, production line, operator, job ID, etc. This new system's primary users will include printers/converters with multi-press stations who want a single inspection station

Global Vision

Global Vision launches its new generation automated artwork comparator, Digital-Page 3.0, which helps ensure packaging accuracy before it's too late. The system is claimed to eliminate printed artwork errors found on items such as labels, cartons, inserts, and press sheets, and to catch errors such as color differences, font changes, location changes, dropped or added text in any language.

Flexo Concepts

Flexo Concepts' demonstrates its narrow web MicroClean System and introduces its new MicroClean parts cleaner. Also on display will be its most recent TruPoint addition, the UltraFlex blade, now an alternative to steel for high line count rolls.

Alphasonics

For the first time, American label printers can view the full range of Alphasonics' cleaning systems, including the non-contact plate cleaner PC500, the AS100 ultrasonic parts washer for UV – which treats the wash water – plus the AS80/AS200 parts washer for water based inks also including flocculation.

Flexo Wash

Shows cleaning systems for all types of press parts, including anilox rolls and sleeves, ink trays, ink sumps, doctor blade chambers, small parts, plates and plate sleeves using eco-friendly cleaning liquids.

Trinity Graphic USA
Will be demonstrating its high line screen platemaking and prepress capabilities for the tag and label, flexible packaging and folding carton markets.

Photopolymer embossing technology saving time and cost on embossing web fed substrates, along with examples of Braille for the sight impaired will be shown, while the Flexographic Trade school will be offering hands on training for prepress and Flexo printing for operators.

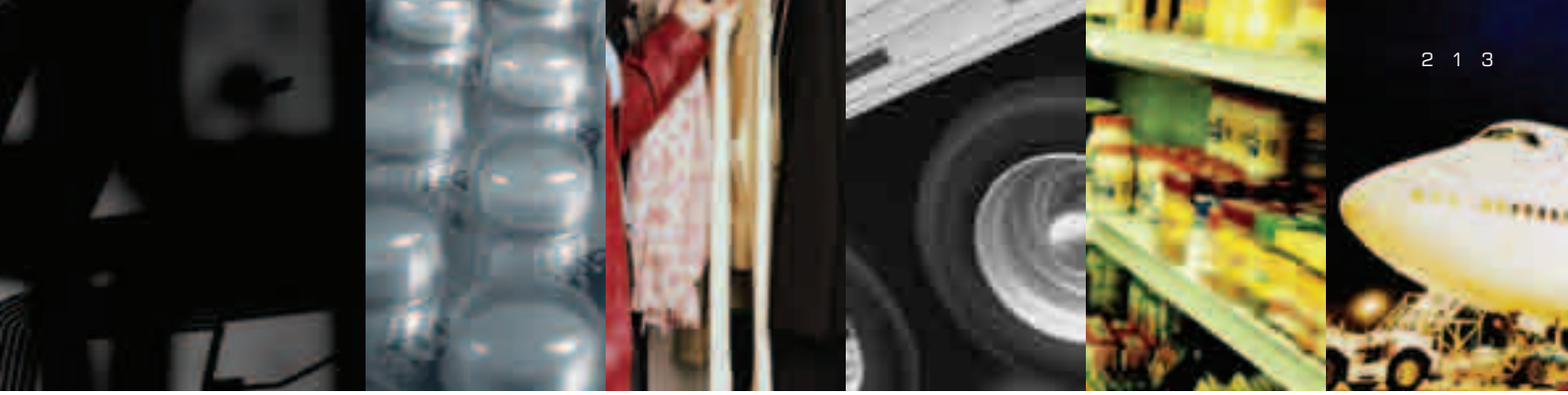
Advanced Prepress Graphics, Inc.
Produces high definition plates with either conventional balanced screening or hybrid flexo screening. The company's Process plates are digitally imaged with high resolution devices. Hybrid Flexo screening allows gradations to zero percentage with little or no press dot gain.

Mastergraphics
Supplies Max-Flex continuous-print thermal polymer sleeves imaged by digital prepress. The company offers the full range of flexo prepress, from creative through contract proofing and digital image carriers-all supported press-side by its own technicians.

RBCOR, LLC
RBCOR, LLC. is the exclusive distributor of Elaslon and Miracon flexographic and letterpress printing plates, as well as Aquaflash water-washable flexo plates, and plate processing equipment. Available thicknesses are .045" to .250".

J M Heaford Ltd
New from the plate mounting and proofing specialist is a 'through the lens' target illumination system. The small circle of LED light projected on to the cylinder from each camera provides a pre-positioning guide and improves the image clarity of the register marks on the plate resulting in faster and easier mounting.

Latran Technologies
Will be demonstrating its Prediction Digital Halftone Proofing System which enables entry into digital flexography by delivering high-resolution proofs that match actual flexo press results using patented LAT technology to transfer pigmented printing inks directly to flexo printing stocks with real halftone dots. Latran's Dalmatian software allows the Prediction to accurately proof spot colors by retaining the exact screening and matching the color using the required combination of CMYK and spot color inksheets.



A Smart foot forward

Smart Label Summit Americas provided a unique international platform to explore the infinite possibilities offered by smart label technology. **James Quirk** reports

Smart Label Summit Americas, which took place in Miami in June, attracted 180 visitors from four continents. The event mixed a table-top exhibition with a conference program that included some of the leading figures in the RFID and Smart technology industries.

High-profile speakers from leading end-user organizations in the pharmaceutical and retail sectors, as well as RFID and smart label experts, delivered presentations to international delegates from the US, South and Central America, the Caribbean, Asia and Europe.

Senior-level delegates from major brands including PepsiCo, Bacardi and Kimberley Clark all attended the two-day conference. Managers from some of the major global printers, including Fort Dearborn and CCL, were also present, as well as representatives from leading American printers such as George Schmitt & Co and Hub Labels Inc.

The keynote speaker was Mike Meranda, president of EPCglobal US, who highlighted the necessity and importance of creating global standards for RFID. 'There is no such thing as a practical regional standard – it must be global,' he said.

A highlight of the conference program was a presentation by Aaron Graham, VP and chief security officer of Purdue Pharma. He spoke about the vast potential for RFID technology to prevent counterfeit pharmaceuticals from entering the supply chain and flooding into local pharmacies around the world. 'The projected rate of growth of counterfeit pharmaceuticals is from $39 billion today to $75 billion by 2010,' he said. Having worked undercover in Mexico for the DEA, Graham has a unique insight into the potential human cost of counterfeit pharmaceuticals.

There was a strong presence of top global retailers speaking at the conference with leading experts from Wal-Mart, Beaver Street Fisheries and J.Crew delivering presentations. Simon Langford, director of RFID and Transportation Systems for Wal-Mart, told how a University of Arkansas research project showed a 16 per cent reduction in out-of-stocks in RFID-enabled stores and how these stores were 63 per cent more effective in re-stocking tagged items. He quoted a Korean proverb, encouraging companies to 'take the plunge' with RFID, saying: 'A turtle travels only when it sticks its neck out.'

> "There is no such thing as a practical regional standard – it must be global"

Neco Can, former chief information officer at J. Crew, focused on how the use of RFID can bring greater customer satisfaction. He told how the technology, when combined with a store loyalty

{SMART LABELS

infinite possibilities

> "Coming to the Summit has been money well spent. We've picked up at least three customers"

card, can produce a personal shopping experience: 'When John enters the store, his loyalty card is read, and it tells me that he likes to be left alone. So I don't hassle him. Then Jane walks in, and her card tells me she likes interaction, so I go over and help her.'

Reuben Isbitsky, co-founder and CEO of Timestrip, spoke about recent innovations in the company's time-elapsed indicator. Timestrip labels are designed to show end-users of perishable products how long an item has been open or in use. When the label is activated, a non-toxic liquid dye travels across it at a consistent rate, giving a clear indication of the amount of time that has passed since the product was opened. The technology can be fully integrated into products or packaging as well as an applied label format.

The Timestrip is evolving, and can now be activated when above a desired temperature, after being initially frozen; it can reveal a message for a unique time-based promotion; and can be used for sunscreen, activating within a set time after the lotion has been applied. New versions of the Timestrip include Fridgestrips, which indicate if a product has been out of its ideal temperature for too long.

A panel session gave a converter's perspective on RFID implementation. Steve Rehling, head of RFID at Procter & Gamble, and Brian Millsap, VP and CIO of Hampton Products, a supplier of hardware to Wal-Mart, gave a glimpse of how converters can achieve ROI with RFID. 'Many Wal-Mart suppliers are complying with the mandate, but not getting the most out of it,' said Millsap. 'They are not looking for the value they can get out of it.'

Masterclasses, which proved to be a great success at previous events, were held the day before the event, comprising of a small focused half-day program led by industry expert Mike Fairley and a panel of key industry figures. The key objective of the various sessions was to provide converters and other delegates with a hands-on, practical understanding of the technology of smart labels and RFID.

Speakers included Ken Daming of Mark Andy; Max Gotler of bielomatik; Mike Harris of Innovative Equipment; Richard

Morris of Parelec; Vito Buffa of Emerson & Cuming; Ray Dickenson of HP; Alexander Dietricht of Atlantic Zeiser; Shaun Stigall of UPM Raflatac; and Jarko Miettinen of Confidex.

'To-date, almost 100 converters have successfully been through the Masterclass program, making valuable contacts with suppliers, gaining confidence to make investment decisions and being able to talk to potential customers,' said Mike Fairley, Masterclass chairman. 'Some have now sourced equipment and are now moving into smart label production. These events have proved a valuable resource to grow the label industry.'

A tabletop exhibition running alongside the conference was packed full of exhibitors including: UPM Raflactac; Mark Andy; Timestrip; Domino Printing Sciences; Atlantic Zeiser; bielomatik; Brooks Automation; Emerson + Cuming; Innovative Equipment; Meco; Muehlbauer; Spraylat; and Xink.

'Coming to the Summit has been money well spent,' said James Earp, vice president sales, Carolina Graphic Press. 'We've picked up at least three customers and the conference was excellent. We will come out with both new business and new knowledge.'

Belarus-based ATB-Group-TSYN, a company which has developed a new security label solution to help brands combat the worldwide problem of counterfeiting, exhibited at the show

"Many Wal-Mart suppliers are complying with the mandate, but not getting the most out of it"

as part of a strategy to break into the North American market. But Vadim Yesepkin, executive VP, found that the presence of other markets at the show provided alternatives: 'Thanks to the great presence of Latin Americans at the Summit, this is now a market we want to break into.'

Roger Pellow, Labelexpo managing director, said: 'We're very pleased with the outcome of Smart Label Summit Americas. There was a great deal of networking, with delegates exploring opportunities in setting up strong new business partnerships. This Summit brought in converters from across the Americas and beyond, who are or will be early adopters of smart/RFID technology. We expect the number of label printers/converters involved in this area to increase over the next few years and there will be a strong potential for significant revenue growth.'

Smart Label Summit Americas 2007 takes place in Miami in June.

Smart Label News

Toshiba Tec SPRINT 'set to break critical RFID tag cost barrier'

Toshiba Tec, a global manufacturer of retail and industrial information systems, claims that its new Print-on-Tag RFID solution SRINT (Short Pitch RFID Encoding Technology) will slash the cost of RFID tagging by up to 50 per cent.

The Toshiba Tec SX-series of barcode label printers are the first printers in the world that are able to successfully print label information straight onto RFID tags. Until now, RFID tags have had to be inserted behind self-adhesive labels to meet the traceability requirements set by government organizations, retail chains and logistics-related enterprises.

While the cost of RFID tags is dependent on volume, the amount of memory and packaging, a 96-bit EPC (Electronic Product Code) tag embedded in a thermal transfer label on which companies can print a bar code, typically costs US 40 cents (22p) or more. But with Toshiba Tec's new SPRINT technology customers can expect a cost reduction of around 50 per cent on this level of RFID label prices, the company claims.

'The RFID Journal has projected that the RFID tag price would come down to 16 cents by 2008 but this new technological breakthrough from Toshiba Tec makes this target a reality now,' said Mike Keane, IPD manager at Toshiba Tec. 'The high costs of tags has been blamed for holding back the use of RFID but Sprint makes it possible for small and medium sized enterprises to implement RFID solutions and buy low quantities of RFID tags at realistic prices.'

Alien Technology awarded EPCglobal certification mark

Alien Technology Corporation has announced that the company has been awarded the EPCglobal Certification Mark for its new UHF Generation 2 RFID integrated circuit. The certification mark signifies that hardware products have been tested and should operate according to the EPCglobal UHF Generation 2 Air Interface Protocol standard ratified in December 2004. This same air interface is in process of being approved as ISO specification 18000-6C.

Alien has received first production wafers from its foundry partner, Tower Semiconductor, and plans to complete the transition to the new Gen 2 chip with Alien's proprietary Fluidic Self Assembly (FSA)-based manufacturing process in the first half of fiscal 2007.

Smart technology for smart labels

Equipment efficiency and a low inserting cost, together with a rapid return on investment, have enabled bielomatik to quickly become a world leader in RFID smart manufacturing technology. **Mike Fairley** reports from Neuffen in Germany

As one of the world's leading and most comprehensive manufacturers of machines for web and cut sheet paper converting and finishing of products as diverse as multi-part forms, mailers, wrappers, cartonizers, exercise books, complete stationery manufacturing lines, ruling and binding pads – even on-demand book production – it is perhaps not surprising that German company bielomatik should have also rapidly become one of the leading suppliers of converting lines for transponder inserting and finishing systems into the rapidly growing new markets for RFID smart labels, tickets and tags.

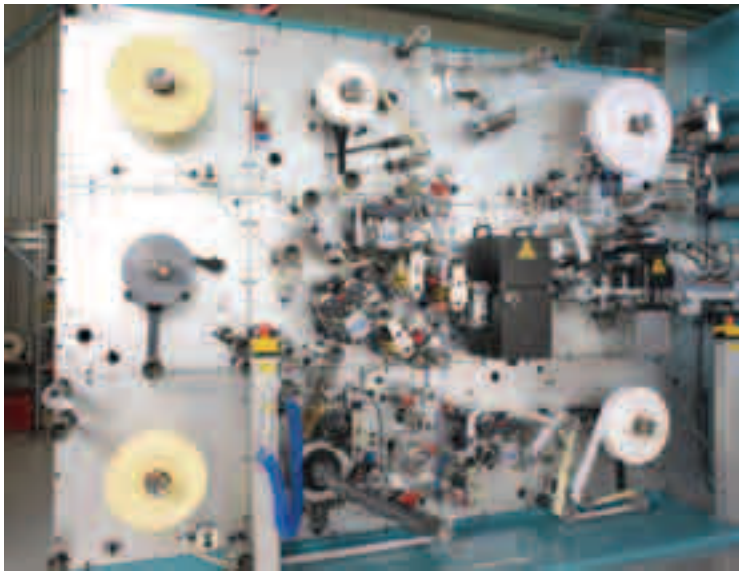
With more than 60 years experience of designing and building specialized paper processing equipment for everything from banknotes to books and tickets – more than 80 per cent of which is exported – bielomatik first began building RFID transponder processing systems for smart ski tickets back in 1998. Today, the company estimates that more than 40 per cent of all RFID labels, tickets and tags manufactured worldwide are produced on bielomatik machines.

Undoubtedly an important success factor for bielomatik while it was going through the learning curve of RFID was the ability of the RFID team to develop quite diverse skills. For a machine building company it is normally unusual to bring together experts from totally different areas, such as including radio frequency specialists in the design and manufacturing team.

Certainly, the combination of paper and radio transmission technology has offered them attractive opportunities in the whole field of automatic identification and data capture related to both people and objects. As the electronic successor to barcoded labels and magnetic stripe tickets, today's smart label and smart ticket solutions require an extensive knowledge and understanding of paper converting, web management, paper finishing and processing technology skills to guarantee a dependable performance of smart paper products in an overall integrated system.

Placing the transponder (the inlay or tag consisting of an antenna and chip to make up the data memory) into the continuous reel-to-reel label web needs to be in correct register, with 100 per cent quality inspection and selection and at operating speeds up 90 meters/minute. High-speed read and write capabilities may also be included.

Such has been the company's success at combining paper processing with transponder inserting that, in total, bielomatik currently now has some 41 machines installed worldwide for the production of RFID smart products, 20 of which are complete modular transponder processing lines which incorporate inlay splicing, chip protection, transfer or hotmelt adhesives, register lamination, register stamping and rewinding. End-use applications for RFID products produced on



Left: Bielomatik TTL 100-165 transponder ticket and label laminating machine

these machines include ski tickets, airline bag tags, pallet and case labels, identity documents, entry systems, fashion tags, pharmaceutical labels and courier labels and documentation.

In due course as transponder costs reduce still further, according to bielomatik, even banknotes will incorporate RFID technology. Indeed, the company see the commercial applications for RFID technology as almost limitless, from identification of goods, products or people, to error-free registration and payment by customers, event ticketing, real-time tracking of products in the logistics chain from factory to supply chain – and even through to the point-of-sale and to the consumer.

Undoubtedly one of the key reasons for bielomatik's success in the RFID manufacturing sector is its comprehensive range of equipment for everything from inlay conditioning to multi-web lamination and finishing systems for all kinds of smart products, as well as high-speed reading and writing units. They also differentiate between dual layer and triple layer flexible smart products, although triple layer products currently dominate today's RFID applications.

Essentially, bielomatik can offer converters a range of equipment from an entry level solution for the manufacture of smart labels, tickets and tags – at an attractive investment price (starting at around Euros 200,000) with product versatility and full flexibility for future capacity expansion and product variations – right through to compact (or intermediate level) machines, up to the ultimate in flexible, high capacity, advanced production machines with features that include hotmelt adhesive application, and even fan-folded ticket production. All levels offer continuous reel-to-reel processing and optional data encoding.

Labelexpo in Chicago is also important for bielomatik. Here they will be launching and demonstrating a brand new revolutionary RFID item of equipment for the label converter, called the Qualifier T-165, which is a high speed Smart Label editing, automatic replacement and encoding machine.

To aid the converter looking to invest in RFID smart production, bielomatik has additionally drawn on expert partners and the best practices from around the globe, as well as established working relationships with chip manufacturers, inlay suppliers, adhesive manufacturers and other ancillary suppliers. They have even developed product performance test methods based on ISO standards and can provide converters with a ready made testing laboratory facility. The Qualified Manufacturing Process they have introduced is bielomatik's contribution to a smart future for label converters.

'With our extensive paper converting and web handling technology experience, expert partnerships and, already, eight years of building RFID smart label equipment,' says Martin Bohn, division manager RFID Transponder Processing Systems, 'we believe that we can demonstrate that our equipment ensures the lowest product cost per unit in the market today. The simplicity of operation of the T-100/165 high volume single track system for example, provides a low wastage rate, continuous non-stop processing and 100 per cent qualified smart label production.

'Using large roll diameters we also provide the lowest number of roll changes for RFID smart product manufacturing in the industry, as well as building in the flexibility for future requirements and changing product specifications. This is due to the modularity of the machine concept that we have developed. Certainly, many of the global RFID smart label leading converters today rely on bielomatik technology, with some claiming a return on investment of as little as 8 months.

'What's more, once a label converter has invested in one of our machines for the production of smart labels, the same machine can also be used to produce smart tags and smart event tickets, such as those used for the recent World Cup football competition where run lengths can be in the many millions, thereby taking them into a range of new markets and opportunities.'

Originally founded in 1946 by Hans Biel, bielomatik is now part of the globally operating Leuze Group, a strong and diversified group of companies which employs over 1,750 people around the world. Bielomatik itself is headquartered in Neuffen, and has production facilities in Kohlberg and Neuss (both in Germany), Bologna (Italy), New Hudson and Windsor (both in the USA), and Singapore. They also own companies/sales offices in Japan and Mexico and are currently establishing their own business in Shanghai, as well as having a worldwide network of representatives.

At the core of the company's technology solutions philosophy are three key attributes: competent, innovative and reliable. It is these three attributes that bielomatik has brought to equipment it builds for the RFID smart label markets. Attributes that make it one of the main leaders in its field and which should see it grow rapidly in the future. ■

E-pedigree evolution

Tony Walsh, European business manager, Integrated Solutions Group, Domino Printing Sciences plc, discusses his reaction to an FDA report on beating counterfeit drugs

In June, the eyes of the RFID industry turned again to the US Food and Drug Administration (FDA), to see what its Counterfeit Drug Task Force had to say about the progress in applying electronic 'track-and-trace' technologies to prevent counterfeiting by establishing 'e-pedigrees' within the pharmaceutical supply chain.

The report held no real surprises and caused barely a ripple in the RFID community. At first sight, this appears perverse, given the FDA's headline grabbing conclusion that the adoption of RFID was slower than anticipated and that as a result non-electronic, paper 'pedigrees' would be enforced from December. But this too raised no eyebrows, and far from being seen as a criticism of RFID, the report was welcomed.

There are a number of reasons for this, including the fact that the FDA had shared its thinking and flagged its likely recommendations three months earlier. In a speech at the RFID World Conference in Dallas in March, Dr Randall Lutter, the administration's associate commissioner for planning and policy, noted the slower-than-anticipated progress and advised stakeholders to expect a report that reviewed obstacles to faster adoption and proposed measures to overcome them.

A further, very important reason is that the report reiterated the FDA's confidence that RFID will play a major role in the future, with widespread adoption of e-pedigrees using track-and-trace technology, including RFID, providing 'an electronic safety net' for the US's drug supply. The FDA urged stakeholders to 'work expeditiously toward that goal'.

But, in our opinion, the most important reason why the report has been received so positively is that its reading of the present situation is spot on - it accurately summarizes what's happening in the field of RFID and track-and-trace, both in the pharmaceutical industry and beyond. The FDA's vote of confidence in RFID's future is reflected in the wealth of statistics demonstrating that interest in RFID is enormous as manufacturers, distributors and retailers assess its potential: for example, according to IDTechEX, the global RFID market will top $7 billion in 2008, primarily driven by item-level RFID happening faster than expected; and Frost & Sullivan estimates that retailers spent $400 million on RFID in 2004 and will spend ten times that in 2011.

Among the factors driving these big numbers are technical advances such as the advent of Gen 2 RFID tags, which not only offer significant operational advantages but also represent a worldwide standard: Gen 2 tags can be read anywhere. At the same time, hardware costs have fallen, and the availability of cheaper tags and readers changes the ROI calculation.

But we believe that the report is most accurate in its perception of RFID's place alongside other technologies. In his RFID World speech, Randall Lutter reported on a public meeting at which 'some vendors [described] hybrid technologies, such as two-dimensional barcodes combined with RFID that might provide both identification and electronic pedigrees even without RFID being universally adopted.'

By the time the report appeared three months later, this perception had been translated into one of the 'key issues' that the

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FDA believes is 'in need of resolution' – in the words of the press statement, 'technical aspects of the mass serialization of marketed drugs by assigning a unique identifier or serial number to each drug package as the initial step in development of track-and-trace technology.'

It's at this point that we in Domino's Integrated Solutions Group see things a little differently from the FDA. We're more optimistic, because the fact is that we are already beyond the 'initial step' stage and have developed and implemented 100%-secure solutions to track and trace pharmaceuticals from manufacture through distribution to consumption. Some involve RFID, integrating it into a hybrid process alongside internationally-recognized alpha/numeric and 2D solutions such as barcodes and Data Matrix; others – for example, the recently-announced pilot scheme implemented at the National Centre for Hereditary Coagulation Disorders in Ireland (NCHCD) – are 'RFID-free' (although the addition of RFID in the future will provide further exciting enhancements to the process).

We have no doubt that the FDA's requirement for pedigrees to be implemented throughout the distribution chain from December will lead to a raft of such solutions – and, after all, the FDA would not have set such an imminent deadline without the knowledge that the technology is there to provide electronic pedigrees in some shape or form, with or without an RFID backbone.

The critical point when discussing 'e-pedigree' is that the 'e' for electronic does not relate to the data carrier i.e. the RFID tag, but the electronic format in which data can be collected, stored, published, accessed and authenticated using a range of electronic, telecomm, wireless and web-based technologies. The data carriers do not need to be electronic to work, if an alpha-numeric code can be scanned or input into a database or data-store then it is just as valid as a data carrier as an RFID tag.

One of the most high-profile solutions – Pfizer's item-level RFID tagging of packages of Viagra – is a prime example. Implemented at the end of last year at its plant in Amboise, France, the process is designed to prevent counterfeiting and product diversion and guarantee patient safety. Each year over 1,500 stock-keeping units (SKUs) and 70 million packages pass through Amboise, which makes most of the world's commercial Viagra.

The solution that Pfizer decided on is exactly the 'hybrid' combination of RFID and alternative data-carriers – in this case the two-dimensional Data Matrix code – that the FDA heard about at its public meeting. Each item is assigned a unique number similar to an Electronic Product Code (EPC) number, which is encoded, verified and locked into a high-frequency RFID tag – married to the primary label – at a production-line speed of 120 bottles per minute. The numbers are allocated at each packaging point along the production line recording the 'parent-child' relationships between the various RFID tags on packs, cases and pallets. Once the RFID tag is locked, the EPC number is passed to a Domino laser that prints the number onto the label in a 2D Data Matrix code format, alongside the lot number and the expiry date (in human-readable form). A pre-printed barcode showing the products National Drug Code is also on the label.

After labeling, the system checks the EPC number on both RFID tag and Data Matrix code – if they don't match, the bottle is rejected.

At first sight, it may seem unnecessary to incorporate the EPC number twice over, but given that many pharmacies now have the equipment to read Data Matrix codes it means they can gain all the benefits of EPC without the need for RFID readers. This is just what the FDA described – alternative data-carriers 'combined with RFID [to] provide both identification and electronic pedigrees even without RFID being universally adopted.' We should expect to see more such integrated solutions in the near future, and with each one RFID's role alongside alternative traceability solutions will become clearer.

In urging the RFID industry to adopt a more 'holistic' approach to pharmaceutical pedigrees, the FDA report has given a huge boost to the causes of anti-counterfeiting and patient safety. As a regulator with enormous reach and influence, it is in a position to set the agenda and shape the industry, and the latest report has done both. In this latest pronouncement it has clarified and codified the position of RFID as a technology that will deliver its greatest benefits in partnership with other data carriers – now it's up to the industry to deliver the goods. ■

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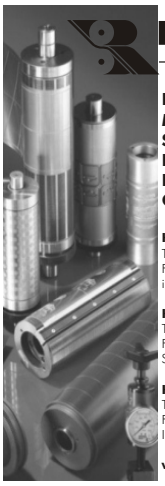

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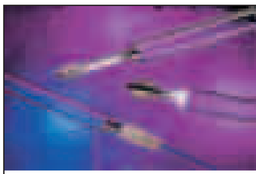

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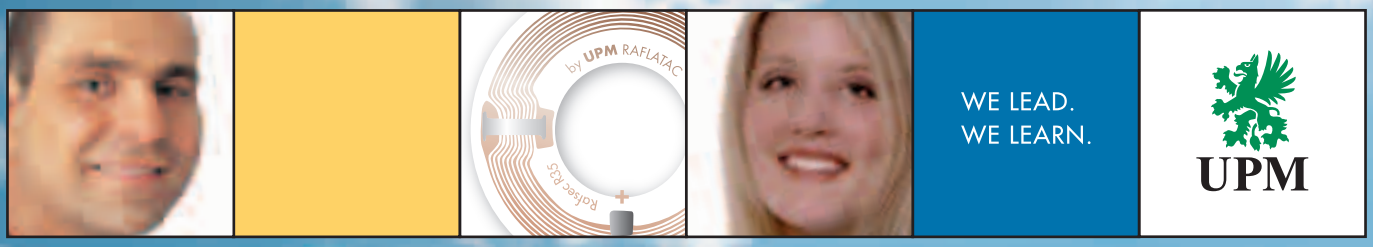

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