FOCUS ON EXPANSION

Equipment and consumable suppliers to the industry offered plenty of ideas for canmakers looking for better quality and productivity at Cannex. Mónica Higuera, Richard Estrada, John Nutting and Daniel Searle report from Las Vegas

Curing systems that save up to 80 percent energy

Green canmaking technology was in demand at the recent Cannex canmaking technology show in Las Vegas.

Swiss three-piece canmaking equipment specialist Can Man made a flying start at the show by selling an energy-saving PowerCure side-stripe curing system to a canmaker in Germany.

The canmaker, which had already purchased a welder and a PowerFeed large blank feeder from Can Man, planned to use the induction-curing system on a 603-diameter can welding line.

Can Man chief executive Reudi Umbricht explained the reasons behind the canmaker's purchase: "The PowerCure unit uses up to 80 percent less energy, saves space – in this instance more than 60 percent – and is 'green', producing no carbon dioxide or other emissions."

The PowerCure unit, which can be used for both powder and lacquer coatings, was on display at last year's Cannex in China, where Can Man demonstrated the system in combination with its X8 welder to produce finished can bodies – thought to be the first time this had been done at an exhibition.

Sheet-feed press with no idle strokes

Most recent development for Germany's Bibra is the Webstar Zero, a sheet-feed press for making DRD cans, ends and lug caps.

Instead of grippers, the press features a two-axis roller feeding system powered by servo motors that enables zig-zag feeding without idle strokes and runs at speeds ranging from 60 to 250 strokes a minute. Changeovers take 15 minutes and the Webstar Zero works with coil and sheet, explained Bibra's managing director Frank Hoffmann.

New business can be found anywhere…

Five units have been sold to canmakers including Standard Can in Thailand, Muhr and Limburg both in Germany.

Bibra was also promoting its roll forming machine for DRD cans, the GDNB model.

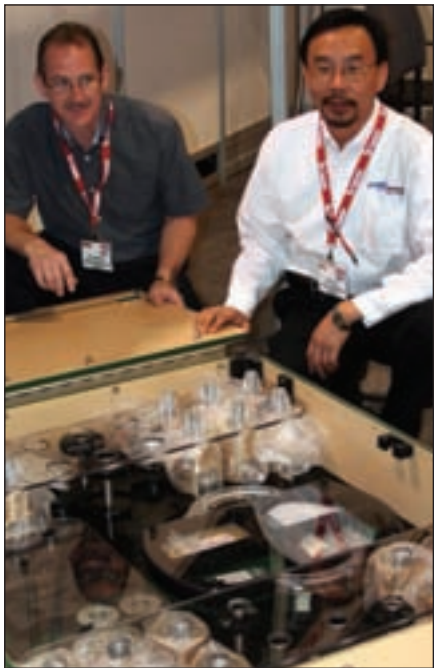
Threading, knurling and curling operations for cans such as those used by Nivea cream, shoe-polish boxes, screw caps and plug lids can be performed in one step.

Diameters range between 28mm and 160mm for a standard machine, while a special design for large plug lids allows for 230mm diameters.

Commenting on the market, Hoffmann noted there had been a significant slowdown of enquiries – while three years ago there were about ten a month, many from China, now is usually one.

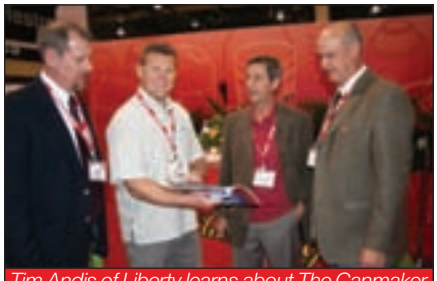
Cannex launch results in 25 orders

A Chinese powder side stripe system that was launched less than a year ago at Can-



Thinking inside the box at PneumaticScaleAngelus

Mrs Zhang Hong, general secretary of China Metal Packaging Association, and Gao Yingxian, deputy general manager of Machinery Technology Development (MTD) inspected the exhibits at Cannex



Tim Andis of Liberty learns about The Canmaker

nex in Guangzhou has since been sold to 25 canmakers both in China and abroad, including Indonesia's IMCP, Dubai's Hassani and Bulgaria's Bulmetal.

The system features ceramic filtering technology and an adjustable stripe width. It was developed by Jorson Trading's managing director Chen Jiawen over five years in his spare time in order to improve existing technology.

The spray head concentrates powder on the centre of the seam and the spray angle is easily adjustable, Chen explained.

Jorson Trading also supplies coil cutting lines, slitters, welders, curing ovens, combination necking, flanging, beading and seaming units, and palletisers; as well as presses, curlers, liners and ovens for end-making.

Talking about canned food in Brazil? – left to right: Canmaker Brasilata's operations manager Silvério Cândido da Cunha; Sílvia Tondella Dantas, manager for metal and glass packaging at the Institute of Food Technology – ITAL; and Brasilata's food division managing director João Vicente de Masi Tuma

A spiral does it – Codi's Jared Jones

Complete package of lubricant and cleaner

Driven by performance and environmental concerns, chemical products specialist Henkel introduced its latest range of cleaners for aluminium beverage cans.

The Ridoline 700 range is said to reduce hydrofluoric acid consumption by between 60 and 70 percent. The cleaners can handle a wide range of oil-loading tolerance and minimal foam in rinse stages, while using surfactants that are APE-free and fully biodegradable.

Henkel is also offering the cleaners as a complete package together with its SNL-2 semi-synthetic cupper lubricant, which is said to eliminate bleed-through, reduce tear-off, maximise can interior brightness, provide long tool life and increased productivity.

The SNL-2 lubricant was developed about a year ago and 20 canmaking plants ▶

Conversions needed for PVC-free closures

Canmakers who manufacture lug caps for food applications are considering investment in new equipment that will enable the application of PVC-free sealing compounds

The new technologies have been under development for some years to meet the requirement of the European Plastic Directive which was enacted in April 2009.

An overall migration limit of 60 ppm (parts per million) was applied to metal closures, compared with the previous limit of 300pm, meaning that PVC (plastisol) gaskets containing relatively high amounts of plasticizers failed to comply, particularly when used for sealing fatty products.

At Cannex in Las Vegas, Teresa Ramos, managing director of Actega Artistica and Gerd Judith, head of Actega's business line converting specialities, representing one of the leading suppliers of coatings and sealants, explained that with global brands calling for PVC-free sealants to meet their sustainability targets, the canmaking industry faces a need to incorporate new sealing compounds technologies, and consequently, to adapt their application systems for twist-off caps and lug tops.

Actega has developed two products that satisfy both the European Plastic Directive and the PVC-free target: Artiseal, a water-based compound requiring additional drying times and Provalin, a thermoplastic elastomer for injection moulding.

"The whole metal closure supply chain is being affected. More than 60 percent of plastisol sealant application is captive production at canmakers," said Ramos, "but now the regulatory issue as well as the trend to PVC-free will progressively push the move towards outsourced materials. Actega is already offering support to a number of key lug caps manufacturers in various regions."

Also at Cannex, German machinery manufacturer Alfons Haar revealed details of an application system for thermoplastic sealants. The TPE machine uses granular polyethylene which is heated in an extruder. This feeds an applicator with a measured volume of sealant which is bonded to the cap's varnish and shaped with a tool. John Dunn at AH Inc in the US said that the machine is available now.

have since adopted it in North America, Brazil, China and Europe.

Cannex helps firm re-establish itself
US conveying specialist Codi found the trade show very helpful to promote the company that has until now mostly depended on word-of-mouth to attract new business.

"We have found Cannex very beneficial in re-establishing ourselves," said applications engineer Jared Jones.

Codi showcased a spiral conveyor in its booth. The 36in wide- by 350ft long- belt can transport/store up to 23,000 cans, and elevates cups or cans using 3hp where a typical vacuum device would require 30 to 40 hp to lift them.

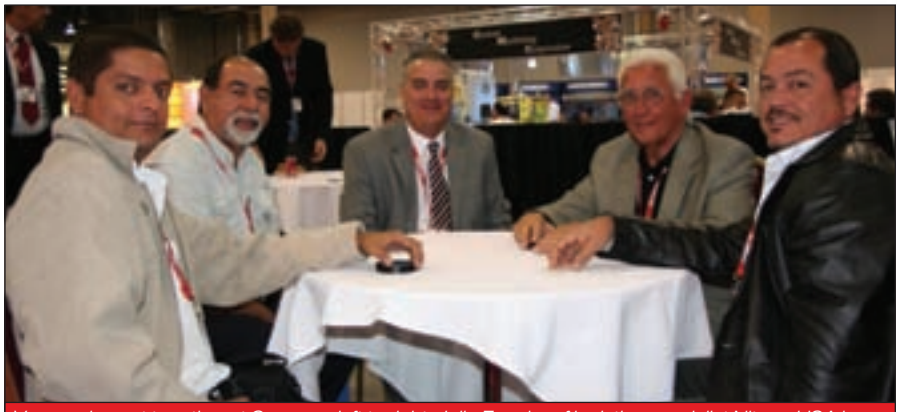
The spiral conveyor provides additional floor space savings with a 350ft long spiral belt measuring only 20ft x 20ft or 400 square feet, compared to the 3 x 350ft long or 1,050sq ft standard conveyor belt.

Also, "a spiral only requires two transfers (on and off) compared to the 16 transfer points with standard mechanical conveying," explained Jones.

Based in Golden, Colorado, the family-owned company started in 1992 primarily as a manufacturer of container conveying equipment, including mechanical, magnetic, vacuum, air and spiral conveyors in a range of widths.

Since then it has diversified into case conveying systems, case conveying retrofits, single belt touchless case turners and palletisers infeeds.

Conversions have minimal impact to ongoing operations
Western Industrial Contractors, which manages turnkey plant modernisations and greenfield projects, has been expanding into the canmaking and canning business, said sales and marketing advisor Martin Ruffalo, who was formerly with Ball Corporation.



Venezuelan get together at Cannex – left to right: Julio Ferreira of logistics specialist Nitram USA in Miami, Florida; Luis Rondon, plant manager at canmaker Dominguez Continental SA; Raul Martinez of Venezuelan agent Inter-Tech; Thomas Womack of filtration system supplier Womack International in California and Jaime Ferreira of Kelko Quaker Chemical, based in Caracas

Now, ten percent of Colorado-based Western's business is in the food and beverage sector with customers such as Pepsi, Miller-Coors, Ball, Rexam and Safeway Beverage.

Recent canmaking projects include the decommissioning of Rexam's 12-ounce beverage can line at Forest Park, Georgia, where about one million pounds of scrap metal and a 20,000 square foot of steel mezzanine were removed from the plant in less than three months.

At the Rocky Mountain Metal Container plant in Golden, Colorado, Western upgraded the can conveyors with a more efficient and reliable system. In ten days, it removed about 2,000 feet of conveyor and installed 2,300 feet of a new system while the factory continued to operate.

At Ball's plant in Monticello, Indiana, it installed a 24-oz beverage can line, as well as installing a high-speed end making line at Ball's Golden facility.

UV curing system a global hit at Cannex
GEW introduced its NuvaPlus UV curing system with Cool-cure technology at Cannex, and enjoyed a positive response to the unit from visitors.

"Cannex has been a great success for us and generated strong leads including some from Canada, Europe, Korea and Sri Lanka," said international sales manager Marcus Greenbrook. "We're looking forward to converting these into sales and doing continued business in the canmaking sector worldwide.

"General acceptance of the new technology has been excellent and we already have NuvaPlus installations in Mexico, Columbia, Turkey, Bulgaria, Lithuania,

Parts, tools and lubrication…

Replacements parts as fast as possible
Bear Products has been filling a niche market in the industry since 1982, producing rubber, neoprene and urethane parts for two-piece and three-piece canmakers.

The California-based company creates its own moulds, but also receives speciality moulds from customers. That's significant when they can top $10,000.

"Some of our customers have speciality equipment and make their own moulds, then they send the moulds to us to produce rubber, neoprene and urethane parts," says Mary Anne Evo, who started the company in 1982 with her late husband, Jack. Bear also makes moulds for many of its customers, she said.

Suction cups, used to transport sheets of tin and aluminum and move the cans on the assembly line, remain one of the company's most popular products. While manufacturers of spare parts often attract more interest during times of economic trouble, Bear's is less predictable.

"When times get tough, people will probably try to get a little more from our parts," she says. "We're sort of like the guys producing tires. People will try to get a little more work out of them, but they also realize you can't push them too far."

What she learned during Cannex is customers keep coming back because Bear Products promises shipments will be out the door the day they're received: "As more people work parts down to the end, they need the replacements as fast as possible."

The ideal partner for the aluminium can
One of the largest grease and metal working fluids producers in the world, Chemtool believes it is strongly positioned to be an ideal partner for the aluminium can industry.

"It was a logical decision to look for canmakers as new customers because they use products very similar to what Chemtool was already producing," said Bob Mack, leader of the Container Technology Group (CTG) of the Rockton-Illinois based company.

Initial product offerings for the D&I aluminium can market include canstock post lubes, cupping lubricants and high performance synthetic coolants. An industrial gear lubricant designed for superior separation from water is also in the mix, as are greases and maintenance lubricants of all types. The most recent addi-

Cans of the Year winners attracted Toyo Seikan executives to The Canmaker booth

Business is discussed at the Blema Kircheis booth

the Netherlands, Syria, India and the UK."

The NuvaPlus system with Cool-cure cures inks and coatings at the outfeed of metal decorating presses. It is designed to reduce energy consumption and optimise heat management. This avoids the problems caused by excess heat during the UV curing process including print register issues, substrate warping, and damage to conveying equipment, the press frame and drives, says GEW.

Free tooling adds to show success for canmaker

After collecting visitors' business cards at Cannex, tooling manufacturer Sedwall drew one to receive a free set of curler tooling.

The tooling set could be claimed when another was purchased, up to a value of $5,500 – with everyone else who entered the draw offered a $500 discount on a new set of curler tooling.

The winner of the draw was Alvin Widitora, director of new product development at Silgan Containers, based at Woodland Hills in California. He said that he definitely planned to take Sedwall up on its offer. The curler tooling would not be for his department, however – the curler in the development centre is in good condition, he explained, and so the tooling would be sent to operations and engineering.

Widitora's visit to Cannex was a success, he said, adding that there was "a lot of follow-up" from the show.

Coating for peelable foil ends in the pipeline

Coatings specialist Grace Davison is currently trialling a coating for retortable peelable membrane ends, which the company is aiming to commercialise by the end of the year.

Chris Schult, business director for can coatings at the company, told *The Canmaker* that Grace Davison is currently testing the coating at operations in Asia, Europe and the US. Developments to the coating have improved areas such as retaining colour during the retort process, and ease of application.

The next step for the company in the expanding peelable end market will be a BPA-free coating, said Schult. "This should be easier than the initial development of non-BPA coatings, as we have now found out what properties are required," he said.

Water-based sealing compounds for all can types

Tetra Polymer Solutions launched a series of FDA-compliant, water-based end sealing compounds at Cannex.

The Houston, Texas-based company was founded in 1991, specialising in developing water-based sealing compounds to replace the solvent-based systems which dominated the industry at the time. After producing a full range of compounds for use with the double seams of general line cans and oil filters, in 2001 the company began working with a leading can manufacturer to develop a further range of sealing compounds.

▶

tion to its product lines has been washer chemistries, including cleaner, etchant, conversion coating, and a final rinse surface conditioner.

"The CTG total package approach has shown synergistic benefits in both improved productivity and cost reduction. An additional benefit which has been documented by several customers has been decreased camera inspection spoilage from pleats, attributed to Nusol Post Lubricant use.

"We have received good feedback from potential customers here at the show. Cannex plays a significant role for us because so much about this industry is relationships, and this show gives us a chance to build on that."

One of Chemtool's washer innovations has been providing a washer surface conditioner to keep aluminum beverage cans moving smoothly through the manufacturing line. It is claimed to not only allow the line to operate at a higher speed, but reduce damages and spoilage rates. "This product gaps the asperites on the microscopic level of the cans surface, and reduces friction," said Mack.

Potential customers have an opportunity to judge its effectiveness before committing to it. "A can plant could run an evaluation on a trial and approval basis so that there is hard data to base decisions on, without financial risk to the plant. We strongly believe in our technology, and just ask for the opportunity to demonstrate the benefits.

"Our surface conditioner not only enhances mobility but also helps drain water off the cans so the washer dry off ovens don't have to work as hard," he said. He noted a Chemtool customer in Texas dropped the temperature on its washer ovens 40 degrees and another in Arizona shaved 20 degrees, because there was less water to dry on the beverage cans.

One-stop shopping for tool supplier

The ability to control a product from start to finish is the best way to assure quality and guarantee customers of just-in-time delivery. That's the driving force behind the growth of Mercier Engineering Group, says president David Wagner, and it explains why Mercier is expanding.

"By bringing it all together, we can assure quality every step of the way, and we can hold to that date of delivery because we're not waiting for an outside contractor to finish a part," Wagner notes. "We're going after the end user, and our pitch is we can offer service, engineering, and product development capabilities, all in conjunction with the ability to self-manufacture our product lines."

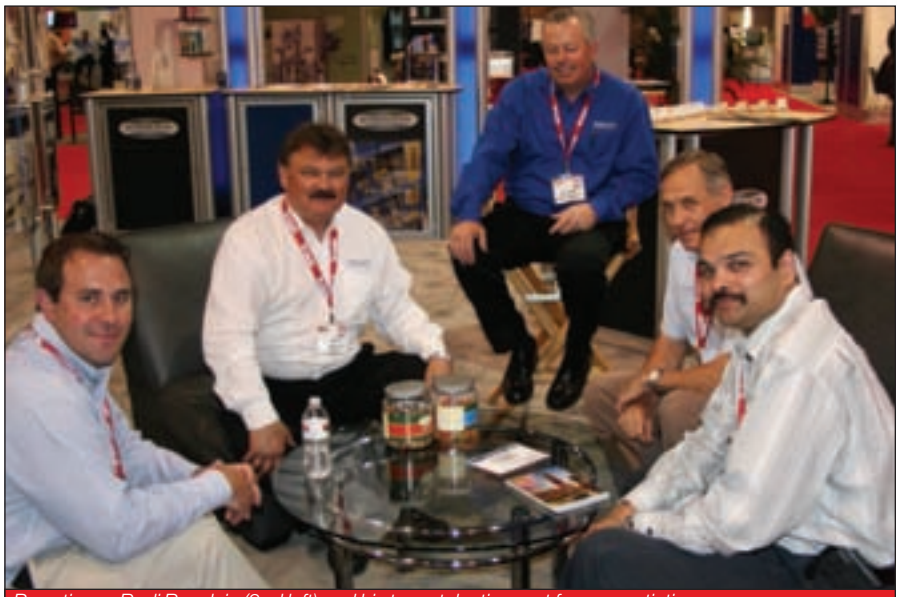
Mercier's one-stop shopping model also

▶ p31

Following extensive research and testing, Tetra Polymer launched the HT 3100 series of compounds, suitable for food, beverage, general line and aerosol cans, and available in a range of viscosities and solids contents.

The compounds are also designed to be environmentally safe, and resistant to acid and alkali, water, animal and vegetable fats, grease, and a range of oils and chemicals, at both high and low temperatures.

The HT 3100 series was developed to work at low film weights, and are fast drying to enable use at high production rates. It is also suitable for thin gauges, smaller seams, and poor or loose seams, says the company.



Busy times: Rudi Roeslein (2nd left) and his team take time out from negotiations

In-house tooling coating system for canmakers

A hard coating for tooling which could be used in-house by manufacturers and canmakers is being developed by Illinois-based company Eifeler-Lafer.

The Alpha 200 system, which coats HSS or carbide tooling with standard commercial coatings such as titanium nitride, has already been developed for other industries. The company is now aiming to launch a system for the canmaking industry by the third quarter of 2010. It could be used by canmaking tooling manufacturers, or by canmakers who regularly need to re-coat tooling, said the company.

Eifeler-Lafer is also working on a turnkey solution for customers, which would include externally-sourced stripping and washing equipment.

The company was also promoting its Duplex coating system at Cannex, a low-temperature process suitable for coating tooling for D&I steel and aluminium food and beverage can production lines. The system is said to produce a compound of

Chinese business: Jorson Trading's Chen Jiawen (right) has been shipping powder side-stripe systems

base material and compound which is more resistant than standard coatings, by combining a plasma-nitride process with a PVD coating to increase the surface hardness of the tooling. It also allows for re-coating of the tooling without causing damage.

Range of innovations on show from Nordson

Nordson launched an air-cooled system for inside and outside side-stripe curing at Cannex, said to be the first of its kind in the canmaking industry.

Suitable for liquid or powder coatings, the ISC2 Induction Heating System is said to use 80 percent less energy than gas burners. As well as curing internal and external side-stripes, it also cures bottom coats on steel beverage cans.

The system is modular, with each module one metre in length and up to five modules powered from one supply.

The US company also introduced a simplified system for re-filling the ink supply of ink dot recognition units. The bottles in which the ink is supplied are now fitted into the unit directly, rather than requiring the operator to decant the ink into a separate holder.

Also promoted at Cannex was Nordson's temperature control unit for inside-spray lacquer, designed to prevent it from drying too quickly on hot cans. The system can also be applied to end lining compounds, to improve consistency and reduce compound usage, and ink in decorators, to improve print quality.

Seamer rebuild that comes in a box

Carrying out maintenance on a seaming machine got a bit more straightforward recently with a service being provided by PneumaticScaleAngelus, and shown off at Cannex for the first time.

Heavy metal: Galland Henning's baler is en route to a customer

Arc Pacific's ovens are the appeal

Rather than having to strip the machine, identify the parts needed, make an order and then have to wait for the parts to arrive, the engineer orders a complete kit in advance, selects the parts needed, replaces them with the worn parts and ships back the kit.

Chane Lee, director of engineering, and Jeff Bernstein, director of seamer engineering showed how everything necessary for a complete rebuild fits snugly into a shipping case complete with paperwork and instructions.

continued from page 29

includes stocking guide pin assemblies as well as wear components for their customers – two aspects that are new to the 64-year-old Ohio-based company. Those aren't big-ticket items like installing turnkey systems, but they provide a steady revenue stream for Mercier and give its customers greater flexibility for payments and improvement projects.

"We'll be able to offer a 12-month contract, for example, to provide a specific number of spare parts. The customer can buy them as needed at a guaranteed price," Wagner says. "Add the fact that Mercier is making its own die sets and its own tooling, and there isn't another [original equipment manufacturer] out there who is able to make such a commitment to one-stop shopping."

Wagner cut his teeth working more than 15 years as a design engineer and salesman for Redicon, bringing that wealth of knowledge to Mercier in 2000. The company was steeped in the manufacturing experience, and Wagner's arrival allowed Mercier to create an engineering division to round out its business.

It's been a formula for success, as Mercier is keeping busy with projects at home in its machine shop and around the globe.

"We have about a dozen projects going right now, and half that work is international," says Wagner. "They range from producing a new die set for one customer, to installing a turnkey system for another. We're staying busy."

That explains why Mercier expects to hire an additional 15 to 20 employees in the next 12 to 24 months, Wagner says: "Some engineers, some in the tool and die trade, and sales people. It feels good to be growing during these times, and it reminds everyone of what a strong company Mercier has become."

That investment goes beyond human capital, as Mercier is buying additional machining centres to increase the output at its Ohio plant. These new machines are a major acquisition for Mercier.

"They will enable us to handle our ever-growing workload and continue to support the reduced lead times that our customers require for faster paybacks on their capital investments," says Wagner. He also notes that Mercier's sound financial footing made the deal attractive. "With our new machines, we can now manufacture the largest shell, cupper, and draw-redraw die sets used in the container industry."