

Changing lines

Three-piece canmakers need flexibility all along the production line to meet customer demand. Daniel Searle reviews the latest developments

Flexibility and quick size changeovers are key capabilities for today's three-piece canmakers, to meet customer demands for faster delivery and shorter runs of a greater variety of cans.

The latest generation of three-piece equipment addresses these requirements, beginning at the start of the fabrication line where coated and printed sheets are slit into blanks.

Faster size changes for slitters

Cepak's electronic hybrid duplex slit is designed for the frequent size changes made in general line canmaking, and allows operators to change diameter in 15 minutes. A prototype has been in operation at Soudronic since the beginning of the year, and in April a unit was installed at Italian canmaker Falco.

Soudronic uses the unit to cut the blank samples needed to test its welding machines: "Compared with the old-style mechanical slit our set-up engineers are very pleased with the simplicity and straightforward setting procedures," said Peter Schreiber, vice president of technology at the Swiss company. "We cut between 500 and 20,000 blanks a day, and make one or two size changes. The test engineers like it very much because of the simple handling."

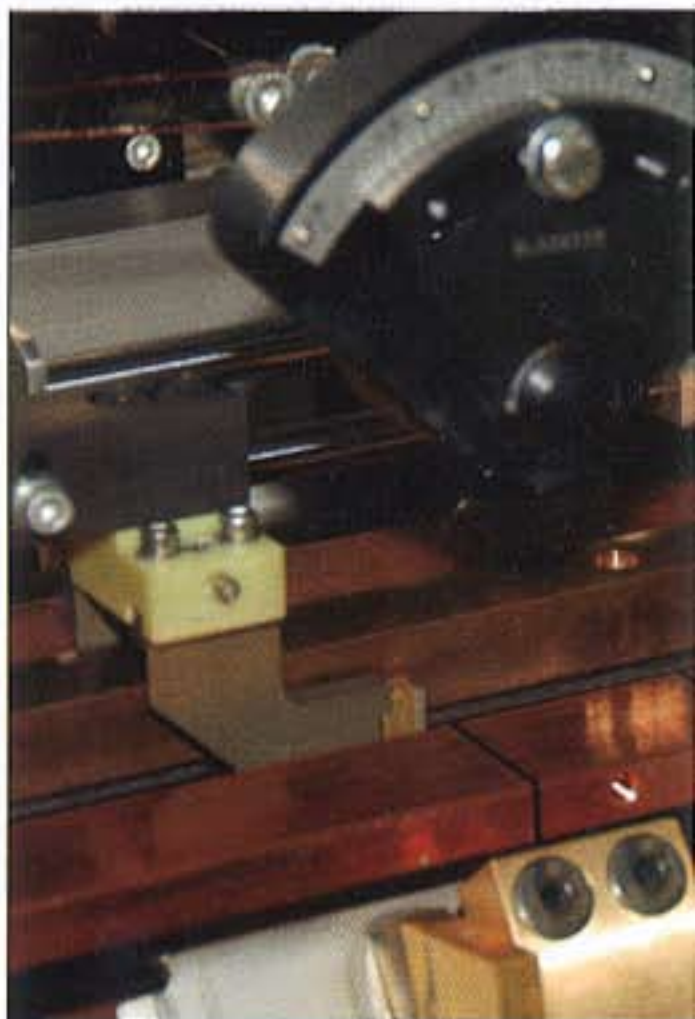
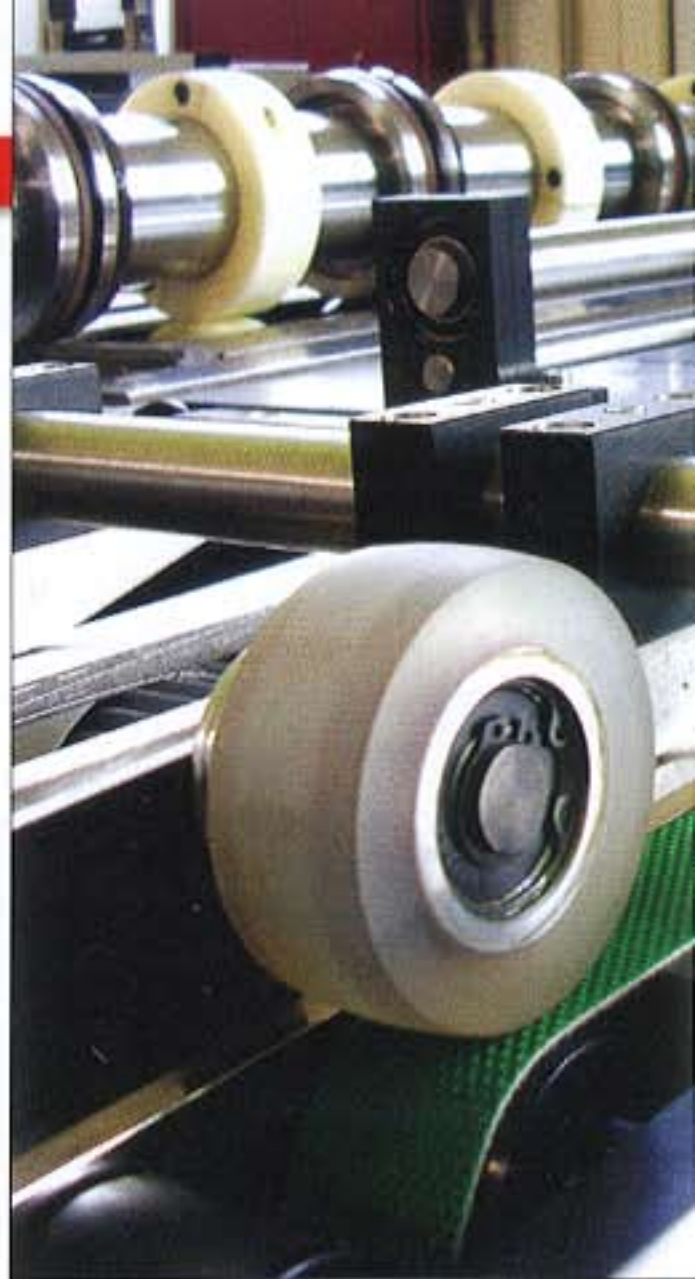
Meanwhile, Can Man is marketing the PowerCut duplex slit (pictured right), developed in collaboration with fellow Swisscan member Langhans Innotec. It offers faster changeovers, with a format changeover possible in 30 minutes. This is a result of the simplified design of the second table which features no drop bars or chain dogs, as well as pre-adjusted cutter shafts which may be lifted out by detaching both brackets.

Blank variation handled with ease

After the blanks have been produced, the handling system needs to be compatible with the short runs of different sizes. Can Man's PowerFeed system uses customised pallets for each blank size onto which blank stacks are loaded manually. The loading section of the unit, which measures 1,000mm by 500mm, features ball bearings, a lifting mechanism and a blank adjustment system to improve the stacking of blanks and the positioning of pallets. The body height of the blanks is adjusted manually, while preset programming for the fork-life may be chosen through the unit's control panel.

For canmakers who use an offline slit to produce blanks for a large number of different can sizes, Soudronic introduced a continuous feeder with automatic height change. The changes take place during production, and incorrect settings cannot occur as no human intervention takes place, says the company. It is recommended for use in conjunction with Soudronic's automatic pallet transfer system between the slit and welder.

Soudronic has also addressed the differing tinplate quality found within batches of body blanks, which can lead to different weld gaps and ultimately faulty welding. Its Adaptive Rolling System uses the curvature of each blank to measure its elasticity, and adjusts the rounding wedge of the body former accordingly to ensure that the formed cylinder is always the correct diameter. The reaction time allows for a top speed of 500cpm. The system, which is available on new welders or as a retrofit on existing units, received the Innovation Award at the recent Metpack show in Germany.



Welder offers automatic height change

Automatic can body height change is one of the key features of Can Man's latest range of welders, the medium-speed X6 series. This comes courtesy of the established QuickChange system, which allows a height change in less than five minutes and ▶



*Top: Can Man's PowerCut slitter features pre-adjusted cutter shafts which may be removed by simply detaching the two brackets (inset)
Above: Soudronic's continuous feeder offers automatic height changes and does not require operator assistance*

THREE-PIECE CANMAKING



Above: Can Man's PowerFood uses different pallets for each size of blank.

a complete format change in 30 minutes.

The TempGuard system controls the machine temperature to prevent 'overcooling' and condensation build-up, thereby reducing operating costs.

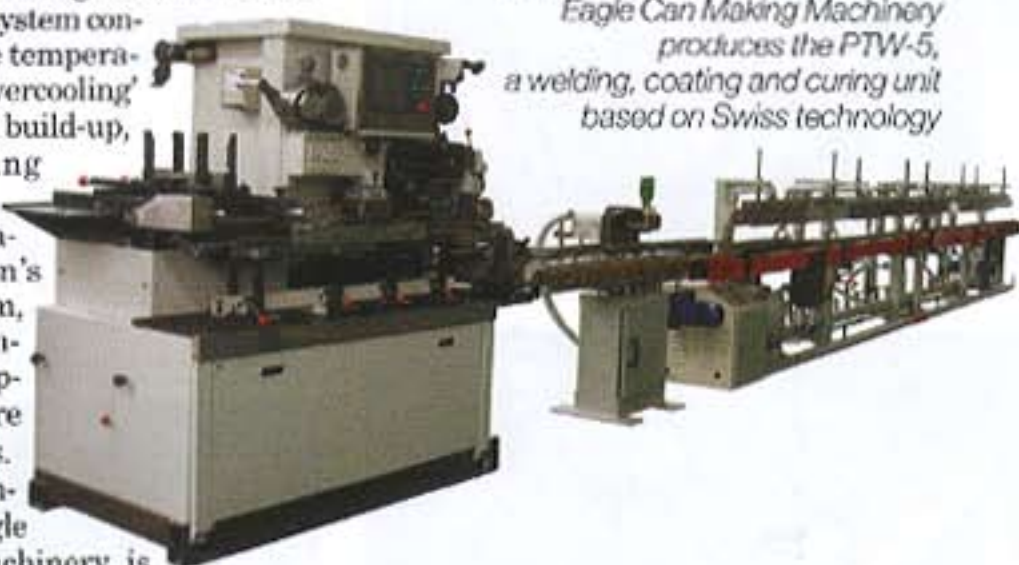
The X6 also features Can Man's PowerFoil system, which enables can-makers to run copper welding wire Imm in thickness.

In China, meanwhile, Golden Eagle Can Making Machinery is offering welding technology similar to Swiss systems in a market dominated by Japanese machinery, says general manager Frank Chan. The PTW-5 welder, coating and curing system uses a liquid glue spray system and gas curing, and has been installed at undisclosed customers in the Guangdong Province of China, and in The Philippines.

Cheaper and more flexible weld repair

Canmakers using weld repair systems with hotmelt plastics now have two further options. The Canmelt 330 unit, developed by Swiss company Canmelt, is said to reduce operating and maintenance costs by half, compared to standard powder or lacquer coating systems. The unit heats plastics wire to liquid form, then applies it

Below: Chinese company Golden Eagle Can Making Machinery produces the PTW-5, a welding, coating and curing unit based on Swiss technology



onto the inside seam of moving cans at a rate of up to 800 cans a minute. It is also said to offer quick diameter changes.

The weld repair market also attracted used equipment supplier Cazander into the first-hand market with its Novuseam. The result of a joint project between Cazander and Billhöfer, the unit is due to be ready for delivery in late 2008: "We are aiming for testing to be completed by this autumn, and for the first installations to take place for non-food applications. Food applications will become available when we get FDA approval," said Arnold Cazander. The unit uses hotmelt plastics supplied by Dutch company Jowat, and is being tested by Can Man. 

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