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Machinery manufacturers respond to tanners' demands

In spite of ongoing concerns about the raw materials market and demand for leather among finished product manufacturers and fashion brands, exhibitors at the 2016 Tanning Tech exhibition in Milan were able to conduct meaningful conversations about investment in new tanning machinery with senior figures in major tanning groups from different parts of the world.

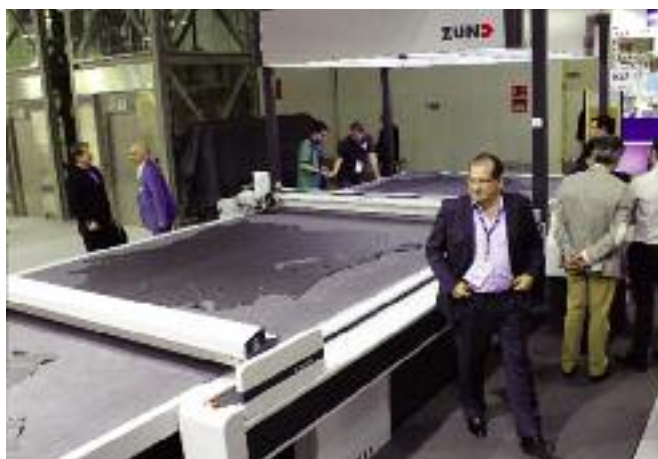
Initial estimates from the organiser of the Tanning Tech exhibition, Italian machinery manufacturers' association Assomac, suggested an increase in visitor numbers of around 30% in the early part of this year's event. The latter part of the event was quieter, but tanning machinery and technology providers still said they were happy with the level of the discussions they had about investments tanners seem ready to make in new technology.

Principal motivations for tanners are to find technology that will help them improve their environmental management and save money on their use of labour, water, energy and chemicals. Senior management representatives of tanning groups including Heinen, the Scottish Leather Group, Wollsdorf Leder, Henan Prosper, JBS Couros, Nakara and Gruppo Dani were among the visitors. *World Leather* was present to gather a series of impressions of the global market from machinery companies and to take note of the latest innovations on display.

At the end of the event, Lamebo chief executive, Gabriella Marchioni Bocca, current president of Assomac and president of Tanning Tech, commented: "Exhibiting companies interpreted customer needs extremely well, offering sustainable and innovative products. We recorded a major increase in visitors from both Italy and overseas and these visitors were especially appreciative of eco-friendly technological solutions. This is fast becoming a pressing global requirement."

Shoe tanners should switch from sides to hides, Zünd suggests

Automated leather cutting systems developer Zünd has said it believes tanners focusing on the footwear market should consider processing whole hides rather than sides, as they have done traditionally.



Zünd wants footwear tanners to cut hides not sides.



Hüni signed its biggest-ever contract at Tanning Tech 2016.

CREDIT: HÜNI

Speaking to *World Leather* at Tanning Tech, the Swiss company's head of sales and marketing, Stefan Lang, said he realised this change would be far-reaching for footwear tanners and would have implications for their entire production set-up, but he said the benefits could, over time, potentially outweigh any upheaval and investment in new machinery.

"We are interested to see what tanners visiting Tanning Tech, [and parallel exhibitions] Lineapelle and Simac will say about this," he explained. "We have thought about the idea carefully and we think it could be good. Our D3 system has worked well for cutting upholstery leather and we have brought it to Milan to show footwear tanners how it works and, we hope, engage them in debate about this."

The main reason behind Zünd's thinking is that the technology offers greater potential for cutting-yield gains with hides rather than with sides. Mr Lang said it's hard to put a figure on this but said an extra 5% cutting yield per hide is not hard to imagine.

China changes suit Cartigliano

Tanning machinery provider Cartigliano has said its business in China is growing in spite of consolidation in the leather industry there. There are now around 1,000 tanneries in operation across China; the number has fallen by nearly 45% in four years.

"Our sales are going up," said Cartigliano's area manager for China (and India), Marco Bidoggia, in conversation with *World Leather*. He explained that the company's way of doing business in China has changed. "We're now selling to big groups rather than one machine to tannery A, another to tannery B and so on," he said. "There are fewer tanneries in China now, but those that are operating there are investing more in technology. The big groups understand about investing now for payback later."

He remarked particularly on the willingness of large tanning groups in China to invest now in his company's full drying line. The Cartigliano Line is a collection of carefully developed machines that tanners can run in sequence from the end of samm-setting to after staking.

Hüni signs record contract at Tanning Tech

Tanning drum and automation system developer Hüni signed the most valuable contract in its near-300-year history at Tanning Tech 2016.

Withholding, for obvious reasons, the number of drums



Ambra self-cleaning milling drum from Erretre.

CREDIT: ERRETRE

involved and any financial details, Hüni's head of marketing and communication, Zlatan Osmanagic, was happy to confirm that his company had signed the record deal on the second day of the event.

He went on to reveal that a major producer of leather in Bangladesh had emerged as the buyer.

"It's a group that has the strength to invest and the vision to see a real opportunity for it to increase its capacity and lower its labour costs," Mr Osmanagic told *World Leather* at the exhibition.

He went on to say that Hüni's newest configuration, the Jumbo tanning drum, which has four deep shelves, has the capability to help tanners reduce their consumption of chemicals by 7-8%, their consumption of water by between 40% and 50% and the consumption of energy by almost 50%, while also reducing their labour costs through the use of automation and process control.

New Ambra's self-cleaning capability proves attractive

Specialist developer of milling drum technology and other tanning machinery Erretre said it had chosen Tanning Tech 2016 as the platform on which to present the latest version of its Ambra product, which it designed and developed through 2014 and 2015.

This version offers better control of friction and heat inside the drum by controlling air-flow. It achieves this by carrying out analysis of what is going on inside the drum and removing, as far as possible, the effect the variables can have on the end result. Erretre has developed a new method of connecting the milling drum to a central control system, which makes it possible to take a reading any time and see immediately if there is a change in the environment inside.

One of the practical spin-offs of this has been a substantial increase in the load a milling drum can take at one time. Capacity has increased to as much as 200 kilos in one load and, as Erretre pointed out, 200 kilos is a full batch in a tannery specialising in fashion leathers, small skins or exotics (200 kilos of which would, naturally, make an especially valuable drum-load).

Another new development is self-cleaning, a function that has gone down particularly well with tanners that have already invested in the new version of the Ambra. Cleaning time is typically between 20 and 30 minutes, which means tanners can carry this task out every morning. Cleaning used to take two or three hours and had to wait until a Saturday morning. Quick



self-cleaning will give research and development departments more freedom to try out new ideas, Erretre argues.

Why metal detectors could save tanners thousands

Tannery automation specialist Equitan has established a new partnership with Ceia, an Italian technology provider that specialises in digital metal detectors.

Ceia's technology has long been in use in a variety of application areas, including airports throughout the world, but the company will now work with Equitan to introduce it to the tanning sector too.

Equitan founder and chief executive, Antonio Antoniazzi, told *World Leather* on announcing the development that he believes the biggest benefit to tanners will be the removal of any risk that a metal toggle, accidentally left on a hide, might damage the next machine it reaches. He said he could easily imagine this causing €50,000 worth of damage.

Soft touch

Automated hide-handling technology provider Feltre talked at Tanning Tech 2016 about its Mach Sensation technology now being able to improve the roundness, softness, touch and performance of hides.

It said that, following close co-operation with leading companies in the tanning industry, Mach Sensation now features "a robust system of sensors", which can analyse the levels of humidity and temperature in hides and help tanners ensure consistency in performance and quality.

CRC success carries over from lab to tannery floor

Many of the conversations Fratelli Carlessi had with tanners at the exhibition centred on its Cell Rotaring Conditioning (CRC) system, which first emerged in 2014 following in-depth analysis of what really happens when a hide dries.

Adriano Peruzzi, head of special projects and research and development at parent company Erretre, told *World Leather* at Tanning Tech that a noticeable improvement in the quality of finished leather has been the result of putting CRC into production. "Every batch can be treated according to its own characteristics and the particular recipe the tanner has used to produce it," Mr Peruzzi said. "You can control the air-flow, the temperature and the humidity and design your drying system cell by cell. Tanners who liked what they saw when we showed them the results of laboratory tests of CRC have been able to carry this over into production."

EU directive boost for GER Elettronica

Specialist in electronic measurement technology for leather GER Elettronica is looking forward to October 2016 when European Union directives aimed at harmonising regulations in member states relating to measuring instruments come into force. The directives in question are Measuring Instrument Directive (MID) 2004/22/EC and Directive 2014/32/EU.

"Tanners should be happy about this too," said GER's technical director, Bruno Burato, at Tanning Tech, "because this will give them assurance that their internal processes are correct. Plus, buyers of leather are going to insist on MID-compliant machines to guarantee that measurements are correct."

He said that buyers may well go to alternative suppliers if a tanner is slow to adopt MID-compliant measuring technology. And he added that GER Elettronica is the only company in the market at the moment that has the technology that can comply



GER Elettronica have measuring machines that already comply with European directives that will come into force in October 2016.

CREDIT: WTP

with the directives. "Non-MID machines can sometimes be converted," he explained, "but it depends on the machine and, in any case, it's not always economically viable."

In addition to compliance with the directives, Mr Burato said GER can also offer Windows-compatibility in its measuring machines. Machines such as the Soft C have a fully hermetic Windows-compatible panel computer on the side. "We've had computerised measuring machines for many years," he said, "but this system is more user-friendly. It's our computer, our PC10, not a commercial one, and we feel it offers a much more open interface. It uses software called XMIS, also produced by us."

High demand for suede puts focus on buffing

A key focus for tanning machinery provider Bergi is to develop machines that can offer leather producers high levels of efficiency while consuming low levels of energy. "Everybody in the leather sector used to think more power was desirable," said chief executive, Mauro Bergozza, "but now they realise that more power equals more cost."

Although it has been developing buffing machines since the early 1970s, Bergi still believes it can bring important innovations to this area. Its latest buffing machine is the Innova, which Mr Bergozza says offers innovation in three ways. "First, the cut of the fibre is much finer than with our traditional buffing machine, the Selecta," he told *World Leather* at the exhibition. "Second, the passage of the leather between the roller and the conveyor is much shorter so that the hides will not fall (the step is less than half as big as on previous buffing machines). And, third, it incorporates a spreader for helping introduce softer leathers to buffing without cutting them."

He said Bergi had already sold eight machines in just a few months in the build-up to the Milan event. For Mr Bergozza, the big advantage these developments can offer tanners is an increase in quality. "This is especially true when it comes to suede," he said. "It seems demand for suede is going up and this means buffing is more important than ever because, unless tanners carry out buffing effectively, any defects will be visible."

Another recent Bergi innovation is in its latest ironing-embossing machine, the Starlux S Vario. Improvements Mr Bergozza highlights include better control of the temperature around the machine's cylinder, guaranteeing a maximum difference in temperature of 1°C across the whole surface, and a new method to distribute embossing oil more efficiently to



produce a more consistent shine. After spending 20 years trying to find the oil distribution mechanism it wanted, Bergi has decided to develop its own, he said.

Turner presents an alternative to rotary spraying

The innovation that attracted the highest number of visitors to the stand of French tanning machinery company Turner at the exhibition was a new patented "reciprocating spraying line" called MAP NR.

Describing the new development as a "robot-driven, no-shock, very smooth" option for spraying whole hides, Turner said it represents a genuine alternative to rotary spraying. It works with one suspended spraying head that alternates back and forth on a chain, with aspects such as air pressure controlled automatically. According to Turner, leather manufacturers can create a general set of spraying rules for a particular type of hide and the computer system that drives MAP NR will do the rest.

"Rotary spraying used to be the only way to spray whole hides," Turner sales director, Romain Chambon, said at Tanning Tech, "because it was the only technology that was fast enough. But 50% of the dye is wasted. With MAP NR, 99% of the dye goes onto the hide, so it saves a lot of chemicals and it sprays better."

Throughput improvements from Persico

Costruzioni Meccaniche Persico developed its first throughfeed continuous fleshing machine in 1977 and has concentrated its efforts on the same segment of leather production. The Verona-based company works closely with partner tanneries in the Arzignano cluster in the neighbouring province of Vicenza and it is this that has allowed it to keep making improvements.

Its most recent advance has been to increase the output capacity of its fleshing machine to 600 hides per hour. "It's not easy to process 600 hides per hour," said the company's Diego Gabrielli. "But if you can make this investment, it will give you savings on labour. It's hard to keep skilled labour in this part of the tannery because people don't usually like to stay on the fleshing machine for long. But when you are processing 5,000 hides per day, you need continuity; it's hard to rely on people for 5,000 hides."

He explained that water and energy savings are also likely. The latest version of the Persico fleshing machine consumes 70 kilowatt-hours of energy. Standard fleshing machines usually consume 60 kilowatt-hours, but to achieve a volume like 600 hides per hour you would need four machines, so you would consume 240 kilowatt-hours in total. "The saving over, say, ten years would be considerable," Mr Gabrielli said.

He describes it as a niche product, but says more than 90% of the mid-sized and big tanneries in Arzignano are using the Persico fleshing machine.

Start-ups in tanning machinery

Perhaps start-ups in the world of tanning machinery are like buses: you wait ages for one and then two seem to come along at once.

There were two fairly new companies at the 2016 edition of Tanning Tech, Revomec and Rotomec. As well as having similar names, both companies are located close to the Arzignano tanning cluster in northern Italy. They have different areas of focus, however.

Revomec's area of interest is milling drums and it claims its technology can produce "softer leathers with an aged effect". Its drums also have a patented self-washing function.



Turner's MAP NR spraying line promises speed and almost no waste.

CREDIT: TURNER

Coming in small, medium and large sizes, Revomec says its milling drums are proving popular with fashion-focused tanners because quick changes of colour and a wide-range of ageing and shine effects are possible.

For its part, Rotomec's specialism is ironing and embossing roller press technology. Its claims include the ability of its patented system to move the heated cylinder to within one tenth of a millimetre of the pressure cylinder. Its machines can work without felt and without oil.

Easy to adapt

The Super Zenit Evolution, Mosconi's latest splitting machine, was one of the company's principal topics of conversation at the exhibition this year.

It is easy to adapt to different hide thicknesses; it has electronic and manual controls for this, with the electronic one over-riding the manual one.

Gemata has splitting on its mind

Splitting was a subject that Gemata had on its agenda for Tanning Tech too. Deputy general manager, Mauro Pellizzari, told *World Leather* that its recent work in this area has focused on making it possible to feed in the hides without handling with the Starsplit S Lime the result.

"We have a few reasons for developing this," he said. "We want to improve things for tanners; we don't want just to push on to the market technology that's already there. Of course there are splitting machines on the market already, but it's not our aim to try to gain market share through having similar products. Instead, we want to address problems that others have not addressed."

He explained that tanners are finding it difficult to keep skilled workers in splitting roles. Hides can weigh 45 or 50 kilos, it's a slippery environment and it's often a night-shift activity because the drums empty at four or five o'clock. "Finding people is not easy," Mr Pellizzari continued, "but it's very important because if you damage the hide, you can lose a lot of footage. If the operative gets tired, you lose consistency, and over the course of a year a person could easily waste between 500 and 1,000 square-feet of leather. The technology, on the other hand, always takes care."

He said Gemata had used its expertise in roller-coater technology to develop a feeder for a splitting machine too. Tanners in Arzignano who have adopted the Gemata machine



are able to operate their production process between fleshing and splitting with few people, just a couple of operatives to feed the hides in, plus people for trimming. They are saving around 30% on labour costs, Mr Pellizzari said.

Physics and chemistry matter to Vallero

Specialist drum manufacturer Vallero insisted that its contribution to overall efforts across the industry to save water, energy and costs is best demonstrated in its Vortex drums. Sales manager, Dorian Paglia, told *World Leather* at the event that Vortex's low-speed technology can help tanners make these important savings. But he said that, while offering a saving of 60% in energy use and of 40% in water consumption, the drums can also offer gains in hide yield and in quality.

"Tanners today have to operate in keeping with strict environmental regulations," Mr Paglia said. "They can either adapt their production accordingly or close down. We have always been ready for this."

He said the days of "normal drums" are over because tanning drums these days have to be "chemical and physical reactors"; the movement of the hides and the float together is very important, he added.

For Dorian Paglia, drum manufacturers and leather chemical suppliers should work more closely together. He wonders if chemical companies are worried about the widespread drive towards using fewer chemicals, but points out that they are better off with tanneries using fewer chemicals and remaining in business than having to close down because they cannot meet the required environmental standards.

Bauce spreads the benefits

Bauce highlighted its MVC-4 throughfeed setting out and sammying machine range in Milan. The company said this latest model is the result of more than 40 years of experience in throughfeed leather pressing and spreading.

Benefits include improved hide area and drying quality thanks to better stretching of hides. One of the options, the MVC4 S Versus RCE, offers a heat cylinder that, Bauce claimed, can improve the quality of finished leather by removing creases and opening up the grain more fully. ☺



Bauce wants to help tanners improve the quality of finished leather.

CREDIT: BAUCE

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