



Mississippi TanTec



The MTL team outside the first new tannery in the US for 25 years. CREDIT: ISA TANTEC



Mississippi TanTec Leather Inc.

Vicksburg, Mississippi, US

Mississippi TanTec Leather (MTL) is the third facility the ISA TanTec group has built in a relatively short space of time and the tannery, which is located just outside the town of Vicksburg, on the banks of the famous river that gives the state its name, follows the layout, the structure and the way of working of the group's already successful sites in China and Vietnam. Discussions about setting up a tannery in the US began in 2013, after the company had completed the transfer of its Chinese operation from Guangzhou to Heshan. The drums started rolling in Vicksburg at the beginning of January 2015, exactly five years after the start of production in Vietnam and almost three years after the start of operations at the new plant in China. Total investment in setting up the project up was \$12 million; it helped that the authorities in Vicksburg had a recently built, but empty, factory ready for a new employer to move into. The previous occupant, a company that makes automotive components, had closed its Vicksburg operation.

There was demand from several of ISA TanTec's big-name footwear brand customers for leather from a US tanner to support

Drums started turning at the ISA TanTec facility in Vicksburg, Mississippi, at the start of 2015, making it the first tannery to commence production in the US in 25 years. Working from wet blue, it retans and finishes hides from prominent US cattle-producing states and supplies finished leather mostly to footwear brands for whom 'Made in the US' has become an important part of commercial strategy.

the shoe manufacturing operations they were building up in the region (most notably in the Dominican Republic). "There was a lot of talk about having product that you could label 'proudly made in the US'," explains the group's senior director of operational strategies, Carl Flach. "So we looked at it. We did the sums and we



Vicksburg mayor, George Flaggs, has quickly become a friend of the tannery.

CREDIT: GOLDEN TRIANGLE PLANNING AND DEVELOPMENT DISTRICT



ISA TanTec founder, Tom Schneider, at the grand opening of Mississippi TanTec Leather in 2015.

CREDIT: ISA TANTEC

realised we could make leather as cheaply in the US as we could in Asia. In fact, we have the capacity to make more square-feet of finished leather here in Mississippi with the same headcount because of the greater use of automation."

First new tannery in decades

It was a courageous move and soon after production began in Vicksburg, ISA TanTec (founded in Asia in 1995 by current executive chairman, Tom Schneider, and with a total production capacity at the moment of 12.5 million square-feet of finished leather), attracted "co-investment" from Kuala Lumpur-based venture capital firm Navis Capital Partners. The leather manufacturing group said at the time that it views Navis as a strategic partner that will support "the further growth ambitions" of ISA TanTec. Mr Schneider is originally from Germany and learned the art of making leather there before taking his skills and knowledge first to Australia and then to Asia; growing his operation by opening a new tannery in the US (the first to come on stream there in 25 years or longer, according to Leather Industries of America) was a decision that surprised quite a few observers. ISA TanTec's perception is that, when major footwear groups began to talk about sourcing more leather in the US, the country's existing leather manufacturers were slow to respond.

"There are good tanners here, of course," Mr Flach says, "but the US industry as a whole had become a bit stuck. There had been no new tannery here for decades before we moved into Vicksburg, and investment levels in new machinery seemed low." The new tannery, like the other two in the ISA TanTec group, works from wet blue and buys most of its raw material from US packers, favouring jumbos, steers and heifers from prominent cattle-producing regions such as the Dakotas and Texas. These raw material suppliers may be few in number, but they are powerful, Carl Flach insists. He explains: "There

are, perhaps, just two or three packer groups controlling the market now." MTL buys around 13,000 of these hides per month at the moment and, from this material, produces a monthly average of around 650,000 square-feet of finished leather. Mr Flach says the Vicksburg plant is still in the process of ramping up its output. It's a spacious site, covering more than 200,000 square-metres, so there is plenty of scope for expanding production. Even without expanding at the current site, but just by using the installed capacity more fully, MTL has the capacity at the moment to increase its output to 1.5 million square-feet per month.

Made in the USA

Around 60% of its finished leather goes into military boots, whose manufacturers have an obligation under the well-known Berry Amendment to procure materials, wherever possible, that are produced in the US. Almost all of the rest of MTL's leather goes into other footwear, including outdoor and casual or lifestyle footwear (with brands such as Timberland, Sperry and New Balance among prominent users), work boots and shoes. The group's relationship with Timberland predates the footwear brand's acquisition by VF Corporation and helped bring ISA TanTec to the attention of other brands from the new parent group, most notably Reef and The North Face.

A recent addition to its workstreams is leather for a luxury division that ISA TanTec has set up with a view to offering leading brands leather that is suitable for use in luxury products, including wallets, handbags, accessories and small leathersgoods. Every luxury leather from an ISA tannery is guaranteed to pass customer specifications and strict laboratory testing, the leather manufacturer says, testing that evaluates physical performance and certifies the absence of harmful levels of restricted chemicals.



Around 1% of finished leather from MTL today is earmarked for the luxury division but there is an expectation that this will grow. Producing finished belts on site, something it has not done so far at either of its Asian factories, is another new idea and the tannery has already won contracts to supply finished belts to a number of prominent brands. It has installed a production line on site by investing in technology from Germany and Italy and has established the idea as a new division of the company, ISA BelTec; it calculates that it can make around 750,000 belts per year with just one shift operating this single line. Tom Schneider explains that this belt production line is working well, giving him exactly what he was hoping for; plenty of belt design options are available and he is particularly impressed by the stitching. He says: "The belts come out with perfect stitching. If you tried to do this by hand it would be almost impossible to achieve this level of perfection."

LITE touch

The group's LITE (low impact on the environment) leather features prominently as part of the branding it applies to its relationships with customers. LITE is a trademarked manufacturing process developed to monitor and reduce water and energy. Retail giant Wal-Mart and California-based casual footwear brand Reef are among the users of the leather that help to promote the LITE concept in joint-branding initiatives. It's a philosophy that builds into the group's business model: the use of renewable energy, saving energy by using natural light where possible and materials such as bamboo in the walls (which is far less typical in Mississippi than in Asia) to reduce the temperature inside its tanneries. On the subject of lighting, Mr Schneider explains that one of the first changes he made to the existing building was to put in LED technology and says this allowed the tannery to consume only 10% of the energy the previous occupant of the building used.

LITE also governs the group's water use and waste management. Water recycling systems are in place; these have already resulted in important savings across the group and a plan is in place to keep saving water and to reduce consumption of fresh water by a further

Footwear brands convinced ISA TanTec that there would be a healthy demand for leather made in the US under the company's LITE principles. CREDIT: ISA TANTEC

25%. Wastewater treatment runs smoothly at MTL. It's on a dedicated industrial site 15 kilometres outside town and there are no residential properties around. The company's responsibilities here are to skim its effluent for solid waste (for recycling or safe disposal) and then send the liquid by pipe to a communal pre-treatment plant before running a further three or four kilometres by pipe to lagoons run by the Warren County Port Commission, the body that looks after the surrounding area's river port operations on the Mississippi. The commission runs three lagoons in total, each with retention capacity of 150 days' worth of effluent.

Slow start

Managing director Tom Schneider admits to having found it slightly harder to get Mississippi TanTec Leather off the ground than he imagined. Brands had made clear their plans to increase production in the Americas, in the Dominican Republic at first and eventually to have more shoes made in the US. The Dominican Republic is "on the doorstep" and can be price-competitive with China. "Brands asked us to help by setting up an operation in the southern part of the US, using US hides from Texas or Kansas and we liked the idea. We didn't want to be in the north; you would spend too much money there on heating. We considered a site in Texas, where there were incentives, as there were here in Vicksburg, but the building was already in place here and it was the right size; it was just what we needed." The car component manufacturer that set up here originally left behind a clean, high-ceilinged space, just right for a new tenant to occupy.

Nevertheless, it seems the brands are less keen on manufacturing in the Dominican Republic now than they were a few years ago, Mr Schneider observes, making MTL's start in life slightly slower than ISA TanTec had hoped. He adds: "It is a good idea in theory because



labour costs there are three times cheaper than in China. They gave us forecasts with big numbers, then seemed to change their minds."

To compensate, there is a stronger focus on the US itself, he says. Nearly 60% of all the leather the US military uses is from US tanneries, for example. But he is also conscious of the need not to become dependent on government support. With supply chains as complex as they are these days, there is often more to 'Made in the USA' than meets the eye, he suggests. A bail-out from the US government helped automotive group GM in 2008 when the financial crisis began to grip, to the extent, Tom Schneider recalls, that many business leaders began to joke that 'GM' now stood for 'Government Motors'. The irony was, and is, that there are often more US-made components in a Toyota vehicle than in a GM one. This is no more than an illustrative point because, for now, MTL has no involvement in making automotive leather.

Faith in the workforce

Apart from this, Mr Schneider's view is that the US could do much more to help investors. He has found it difficult to get visas for leather technologists and technicians, for example. He has had a hard time with the US customs and immigration bureau himself, with officers asking for a special investors' visa, making it harder for him to enter the country, invest money in it and create jobs for its people than he believes it ought to be. He is to testify at a US Congress panel hearing in the coming months to give an account of his experience so far and to outline ways in which the system could, in his opinion, improve. He is looking forward to the opportunity. "Our people will be able to come through the border," he insists. "But this has certainly been one of the big issues and if I was starting again, I would make sure I had eight local people in place to carry out the work for every one person who needs to come in from outside." Just over 100 people work at MTL at the moment, but a plan is in place to create a total of 360 jobs here within five years. An initial core group came to the company through local recruitment agencies, but the workforce quickly began to grow through word of mouth. One of the first things this

MTL works from wet blue, so samming is one of the first activities on the production line there.

CREDIT: ISA TANTEC

initial group did was fly to Vietnam to observe and learn from ISA TanTec's operation there. A party of about 20 Vicksburg people went, many of them leaving the US for the first time. Some people in the group had never even been to New Orleans in the neighbouring state of Louisiana until it was time to go there to get a passport. Mr Schneider is conscious of how big an early impression this trip made on these employees but he insists that the most important benefit was that it let them see how a tannery works. "Seeing that, and seeing everything behind it, was new for them," he says. "Seeing how well organised everything is in Asia meant that when Asian trainers came to the US, it was easier for the workforce here to appreciate the knowledge and experience those people had come to Mississippi to share. And, on top of that, investing in the trip to Vietnam let them see how much faith we have in them."

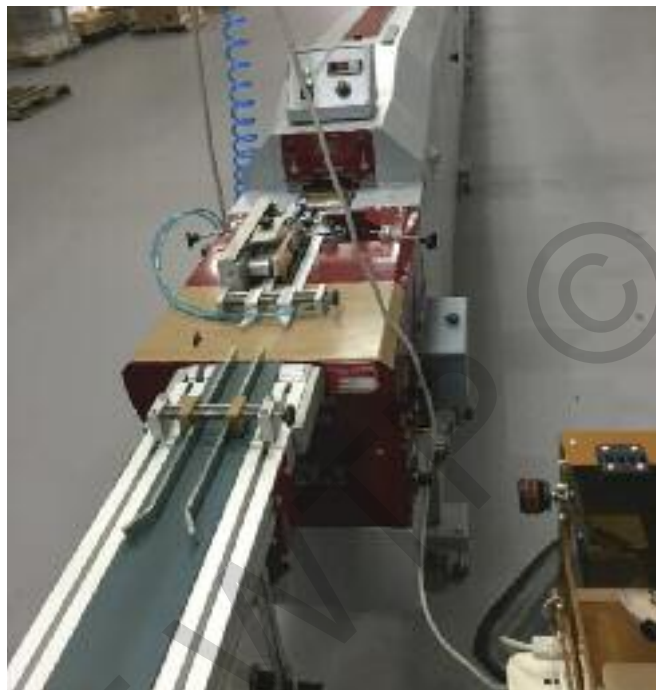
When the mayor is your friend

Relations with the local political and social figures in Vicksburg are particularly good. The Mayor, George Flaggs, who is from a production background, quickly came to regard himself as a friend of the company. He benefits by having a growing reputation for being able to attract manufacturing companies to the area, creating jobs. On the softer side, the police chief, Walter Armstrong, has found a ready-made sponsor for a sports programme he runs for teenagers, trying to encourage them to play soccer instead of hanging about on the streets.

Mayor Flaggs knows his people well. He says most of those who work at MTL live in Vicksburg but says it's far from unusual for people in the state of Mississippi to drive much further to and from work every day; a study has put the driving distance that commuters regard as manageable at more than 100 kilometres



Specific customer requirements regarding colour and technical characteristics such as waterproofness are taken into account during retanning.



The Vicksburg facility also brings belt production to the ISA TanTec group. There is demand for US-made belts too.

CREDITS: ISA TANTEC

each way. This, coincidentally, is exactly the distance from the town to a Nissan car assembly plant in Canton, in nearby Madison County. He insists that these distances ought not to be necessary for the MTL workforce to cover because, within a 40-kilometre radius of the tannery there is a population of more than 100,000 people. Vicksburg itself has a population of around 25,000 and the mayor would like this figure to grow; he explains that, with a population of 25,000, the town can have urban status and access to urban funding for infrastructure projects and so on, money that rural development schemes cannot provide. That's why attracting jobs to the area is of such importance. A small amount of growth in the population would help make that status secure, although he says he likes it that Vicksburg is "large enough to be progressive, but small enough for everybody to know everybody else". Most of the people he grew up with have continued to live here, he says.

George Flaggs, who between 1988 and 2013 was elected to represent his community at the Mississippi State House of Representatives, helped attract Nissan to Mississippi in 2003, followed by rival Japanese automotive company Toyota, which opened a plant at Blue Springs, in the north-east of the state, in 2011. Now tyre manufacturer Continental is building a factory of its own in Mississippi, on a greenfield site 40 kilometres from MTL, near Clinton. Production there should start before the end of 2019 and the company aims to create 2,500 jobs in the area. This, too, is a project that Mayor Flaggs has contributed to. "Part of what I have done is tell companies about Mississippi TanTec," he explains. "I say that it's an international company with its roots in Germany and Asia whose arrival in Vicksburg has helped us open up the market. We can manufacture and produce here; we can find the workforce. It's challenging and there is a lot of competition, but it can be done."

Apprenticeship programmes

Youth employment is another focus. Tom Schneider says he wants to be at the forefront of setting up apprenticeships in Mississippi. He believes that, of all the companies active in running apprenticeship programmes in the US at the moment, the programme most worth emulating is that of German automotive company BMW. Mayor Flaggs says he looks forward to a day in the near future when young adults from his community are combining study at institutions such as Hinds Community College, which has a campus in Vicksburg, with work at the tannery. "That was my background too," he explains. "I got a job in a chemical factory and I went to college from there and that can happen for our young people now. That's why TanTec is a perfect fit for this community because it will help us to provide employment here, where people can work, go to college and live at home and my whole aim is make sure local people know these opportunities exist. The TanTec team also lives here, it's investing in our community, it's being successful in our community and it's setting a good example to others."

In keeping with this, Mr Schneider has invested heavily in on-the-job training from the outset at MTL and at the time of *World Leather's* visit had three technicians from his tannery in China at the US plant to train local workers. All of this is helping the leather manufacturer keep staff turnover down to a very low rate, for this market, of 2.7% in the month of February 2017. The corresponding figure for a nearby factory run by a food company was 25% and that factory (and other manufacturing firms in the area) are turning over almost their entire workforce year on year. In some cases, there have been reports in local media of workers being refused basic rights, such as toilet breaks. "For us, this is about the way we treat people," Mr Schneider says. "We have a competitive salary structure, a better working environment and offer benefits such as a



retirement plan, life insurance and comprehensive health insurance for our employees and their families. More than that, it's that the treatment of people here at MTL is good. The atmosphere here is pleasant and relaxed and word has gone round the local community that this is a good place to work."

George Flaggs agrees in the power of 'word of mouth' and says he knows for certain that MTL's reputation among local people is good. He explains that he can be sure about that because, if it were otherwise, if there were any complaints about the company, he would hear about them right away. "People are not slow to complain," he says, laughing. "That's why I go to buy groceries at Wal-Mart at three o'clock in the morning and it's why I go to church late and leave early every Sunday, because otherwise I would be there for a long time listening to people's complaints."

Machinery investment

Wider developments involving tanning machines and the technology systems that run them might also have made it easier for Tom Schneider and his team to have the Mississippi project run relatively smoothly from the start. As mentioned, he designed the Vicksburg facility to the same layout as exists at the tanneries in Vietnam and China, establishing a similarly well equipped laboratory and sourcing the same machines and the same chemicals for the new tannery as ISA TanTec uses in Asia. To be able to improve on that set-up, Mr Schneider feels strongly that "a plant-wide system" is sorely needed in the leather industry of the twenty-first century. He explains: "We have all these machines, each with its own computer. You set them all up to make product A and then run like a rabbit to adjust them all when the time comes to make product B." He names Italian technology providers Gemata, Baucé and Cartigliano as members of a small group that "shows innovation", but says there are few others. And even among the members of this select group, requests for a basic design meeting have been met with blank looks. "We wanted to know how the machines would line up with our energy and water supplies and if we had the space for them," the company founder says, "but they didn't know what

The Cartigliano Line occupies a prominent position on the tannery floor.

CREDIT: ISA TANTEC

we meant." He believes that what is required is "people who sell", which means companies that will make a genuine effort to understand his business and convince him and other leading tanners that they have something worth looking at. "What we often have instead," he says, "is companies that allow us to buy, rather than companies that seem genuinely to believe that they have something new, something interesting and that are willing to make an effort to sell it to us."

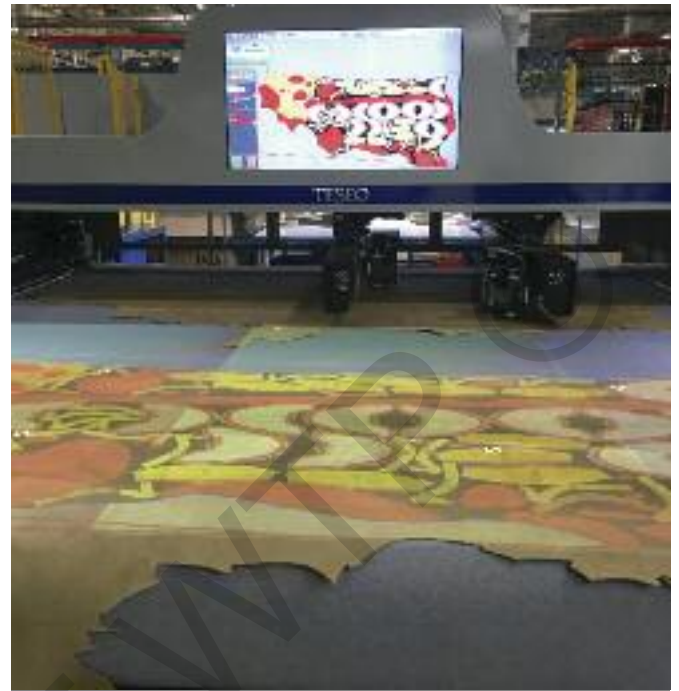
Retanning takes place on a mezzanine level, with each customer's specific requirements regarding colour and technical characteristics such as waterproofness being taken into account during processing. At ground level, the Cartigliano 'Just In Time' Line, a grouping of carefully developed machines that tanners can run in sequence from the end of samm-setting to after staking, occupies a prominent position on the MTL factory floor. The version of the Line that MTL has chosen as a good fit for its needs has conveyors connecting samm-setting, wet stretching, vacuum drying, a second wet stretching, the Cartigliano TAIC conditioning system and, finally, staking. A team of seven people operates the whole line. "Without having everything joined up like this," Carl Flach says, "we would need a minimum of 12 people to carry out the same work, with a lot of that work involving picking up the hides from one machine and feeding them into another."

Moisture management

The many people in the global leather industry who know Mr Schneider will not be surprised to learn that he has begun to forge ahead with technology advancements of his own. He now has a proprietary system in place for achieving more accurate information about the moisture content of hides as they come out of the vacuum dryer. It's technology that comes from a company called Globo Cord,



Moisture Matic is new technology that MTL has introduced to help it assess more accurately the level of moisture in hides and run its vacuum drying operation as effectively and efficiently as possible.



It was always part of the plan to carry out automated cutting at MTL for footwear customers.

CREDITS: ISA TANTEC

from south-western Germany; it's run by his brother, Hans-Joachim Schneider. The technology, which is called Moisture Matic, has been in use for some time for Globo Cord customers in other industries, notably tyre production. Using it to gauge, more or less in real time, what effect the vacuum dryer is having on the moisture levels in hides will allow MTL to make more informed judgements about how best to configure the drying unit, allowing the leather manufacturer to run it at optimum efficiency and achieve energy savings and a gain in yield, MTL hopes, of 1% or 2%. "This technology means we can see the temperature and see the level of moisture in the hides as they come through and, with that information, we can adjust the drying time," Mr Schneider explains. "The point is that, with this, you have a level of control that nobody had before." He says Globo Cord has already initiated discussions with other leather manufacturers over the possibility of using the technology in their operations too.

Cutting edge

Part of the strategy from the start with MTL was not just to produce finished leather, but to carry out footwear upper cutting operations at the tannery, too. This is an activity the ISA TanTec group had wanted to invest in for years, but the idea always met with considerable resistance in Asia because the big contract manufacturing groups in the footwear industry there resisted it. It stands to reason really because factories make margin from the cutting yield and don't want to give that up. The equipment on site at the Vicksburg tannery, therefore, includes cutting technology from Italian company Teseo. The theory is that, with automation, cutting leather for the uppers is something footwear brands can carry out anywhere, at any partner company that has the necessary knowledge and equipment. It's the stitching that's the expensive part of the operation because stitching requires high levels of skilled labour.

Stitching a finished shoe in the US is expensive, but cutting the upper for it need not be.

When it comes to leather chemicals, Carl Flach explains that ISA TanTec has pursued a strategy of being "very lean" for some years now. "We've simplified our formulations and are working with fewer suppliers," he explains, "and we're strict about the companies we let in. They have to offer something new, good value for money and good service." Here, too, the group's experience in Asia, where it formulated this strategy, gave it a template to follow when setting up its newest business in North America. Being lean in chemical sourcing makes him wonder why leather manufacturers who share clusters do not also share chemicals purchasing. It's not something MTL could readily contemplate because it has no near neighbours from the industry, but in genuine clusters, such as those that operate in a number of countries (India, China, Thailand, Italy, Spain, Portugal and others) he says there are possibilities for tackling this and other questions from a common point of view to enable tanning companies to increase their efficiency and grow together. The principle is already in place because of the way common effluent treatment plants run (the successful ones at least) in many of these leather manufacturing hubs: tanners are often joint-owners of the waste management operator.

"Each company would still make different products," Mr Flach says, "and would still have its own way of presenting those products. There might be overlap on colours because I guess more or less everyone is producing finished leather in the same colours, but there is a lot companies could do to distinguish themselves and a lot they could do together. Human resources and the whole administration side of the business could be done in common, including a joint training company. If clusters haven't worked as well as they might, it's probably because the different tanners didn't sit down together for long enough beforehand to reach agreement on things like this." 🌐