



Actis has begun offering "a middle way" on fully automated production lines.

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A middle way on automation

French robotics and automation technology provider Actis RB System believes in using advanced technology in the footwear production sector just as strongly today as it did at the time of its launch in 1982; it grew out of an older technology provider that supplied Goodyear welting machines to shoe manufacturers in France throughout most of the second half of the twentieth century. Although the global footwear sector looks completely different almost 35 years later, the fundamentals remain unchanged, according to the company's general manager, Caroline Blanc-Andrei. Automation and robotics, such as roboticised tooling cells or pick-and-place applications for loading lasts onto injection machines or putting inserts into moulds, can increase lean thinking, efficiency and quality in footwear factories if manufacturers are

Automation and robotics technology provider Actis RB System has adapted its approach to the footwear production market in Asia. It is now sure that the right mix of a traditional workforce with some carefully chosen and correctly integrated automation will offer shoe producers in most markets significant efficiencies and an acceptable return on investment.

able to integrate them into their production processes correctly.

Clearly, the biggest change that Ms Blanc-Andrei has been able to observe in the years since Actis began to look at the automation technology needs of the footwear industry is that most of the French footwear producers who used to be the mainstay of the company's customer list are no longer in operation and a huge proportion of

shoe manufacturing has now moved to Asia. "We can automate anywhere," she points out, "and if 80% of the business is now in Asia, that's where we need to focus too. Asian manufacturers are beginning to be ready for automation, but we have realised that it can be hard for companies there to get the return on investment they need and we have had to adapt."

The simple truth is that if volume footwear manufacturing has, largely, left Europe and North America for Asia, it's because labour costs in the Far East are far easier for price-conscious producers to bear. Expensive automation technology, logically, is at its most appealing in locations in which labour costs are relatively high as the savings it can offer are more attractive. Nevertheless, with labour costs now rising in China and in Vietnam, the once-baffling argument that shoe manufacturers there might consider using automation instead of recruiting more people (often in very competitive labour markets) is beginning to resonate.

ASIA-SPECIFIC

In Actis's case, a joint venture, established in June 2004, with Hong Kong-based group Fung Yu is helping. Fung Yu has a sales office across the border in Dongguan, the fulcrum of footwear manufacturing in southern China, and a team dedicated to presenting Actis RB System's concepts to companies there. Actis has kept research and development in France but has licensed Fung Yu to use its patented technology to build some of its systems in China.

Ms Blanc-Andrei explains that what Actis has sought to do is "find a way to develop a system for Asia specifically", which she says will mean achieving the same gains in quality and productivity but with a lower level of investment on the part of the footwear producer. "Fifteen years is too long for these companies to wait for a return on their investment," she says. Central to the new Actis approach is to concede that shoe manufacturers can have roboticised cells only at certain points along their production lines. There is no need to invest in having this level of automation all the way along. What's important is to invest carefully and to choose to put in automation precisely where it will make the greatest difference. "The robot is not the main thing," the general manager says. "If customers feel they cannot afford fully roboticised systems they will not buy them, and we don't mind that; there is more to automation than robotics. It's like cars—you don't need a Ferrari to go five kilometres along a road that has a speed-limit of ten kilometres per hour."



One idea, using automation to roboticise specific cells, has been to process soles and uppers on the same line.

AFFORDABLE LEAN THINKING

Recently, the technology provider developed a system that allows manufacturers to introduce some automation and some lean thinking at a much more affordable level. It's a set-up that allows them to process soles and uppers on the same line. "The old way was one line for uppers and another for soles," Caroline Blanc-Andrei explains. "Yes, it's slower, but some robots can do both, even in operations that still use cementing rather than direct injection." Actis still believes people are needed in footwear factories but, if company owners integrate robotics and other forms of automation correctly, the operators they continue to employ can be more effective and enjoy their work more. Ms Blanc-Andrei continues: "Humans are still cleverer than robots. The robot's role is to help the operator work more efficiently."

Her company's new system consists of a double working table that brings the upper and the sole to the operator at the right moment to make sure the employee is never waiting. Actis makes it clear that it wants its

customers to achieve better efficiency, to increase quality in their manufacturing of shoes and to instil lean thinking into their operations. "But it can't be just by pushing a button and having all your problems solved immediately," Ms Blanc-Andrei says. "There has to be a middle way and we believe we have found it."

She refers to it as roboticising specific cells on the production line on a modular platform, with a proprietary software application to manage the way different tools move to carry out scouring, roughing, priming and cementing of uppers and so on. She accepts completely that moving to a single line for soles and uppers will require training and some adjustment on the part of the workers, and that it is also important for footwear manufacturers' management teams and for technology providers to listen to the workers. "We know that in some factories, some employees were spending as much as 30% of their time waiting for materials, looking for something to do, waiting for things to happen," the Actis general manager says. "It is possible to have a much better flow management than that." 