

Sealing

Case study: Auto parts, Hella, Mexico

Applications

- Machine Tending
- Sealing

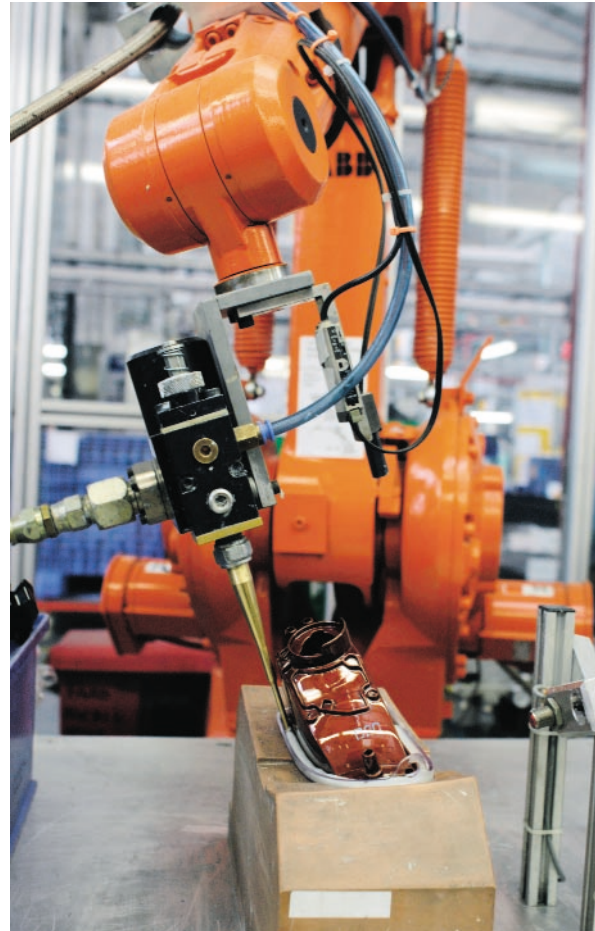
Workers at a Mexican auto-parts plant welcome their mechanized workmates because they relieve them of drudgery. And factory bosses say the machines give them a leading edge in a fiercely competitive market.

Mexico's auto and auto-parts industries are going through a lean spell. The nation's economy is recovering slowly from a prolonged recession, and consumer confidence has yet to gain strength in the United States, the destination of more than half of Mexico's exported cars. Yet you would never guess those difficulties from the smile on the face of Rafael Lopez, technical general manager of the Hella Mexico plant. The plant, which makes headlamps, is situated in Tlanepantla, on the outskirts of Mexico City, home to nearly 20 million people. But in Tlanepantla, a cluster of hills puncture the urban landscape.

At the Tlanepantla plant, production has been growing at about 20 percent a year. "And it's continuing to do so," says Lopez as he looks out from his office balcony onto the spotless factory floor below. Each worker wears equally spotless white overalls emblazoned with the blue logo of Hella, the Germany-based parent company. The workers form teams of half a dozen or fewer beneath large signs that proclaim the models for which they are making parts. The signs are a roll-call of auto industry leaders: BMW, General Motors, Volkswagen, Nissan, Mercedes-Benz and more. And just as soccer squads have a star player or libero who provides a backbone of quality, so too do the Hella Mexico production teams. The Hella Mexico liberos, however, are protected by glass and steel cages, for they are robots, purchased from ABB Mexico.

Consistency and quality

Why robots in Mexico? Although Mexican labor costs have risen in recent years, they remain low by the standards of the U.S. and Europe. "That's not the issue," says Lopez. "Each robot costs



40,000 to 50,000 U.S. dollars, but we're looking for consistency and quality, and that's what the robots offer. "The robots achieve a precision that no human can match, no matter how skilled she or he is," he says. "We use the robots to take pieces out of the injection moulding machine, and for the application of adhesives. The robot's action never varies the way a human's would. That way you get much better quality." Hence the roll-call of prestige



clients that hangs over the Hella Mexico production teams. And, of course, far fewer parts have to be scrapped for failing to meet quality standards. “Besides, with the robots, we’ve achieved a big reduction in downtime,” Lopez says. “And productivity is up by 10 to 20 percent. “But the main reason for getting the robots was the need to improve quality,” he says.

Continuous growth

In deciding on the purchase, it helped that Lopez’s boss, Eckart Miessner, the Hella Mexico general director, is a former senior executive of ABB Mexico. “In fact, I’m the man who brought the robots to Mexico,” says Miessner, who adds that Hella Mexico will be investing some USD 150 million over the next five years. A substantial slice of that is likely to be spent on yet more robots to add to the 44 already working at the Tlanepantla plant. Lopez reckons that 10 to 12 will be added in the next two years. Surely the workers must be worried about the prospect of losing their jobs? “Not at all,” says Lopez. “The robots never displace workers. We only introduce them when we launch a new

line of production. Since the plant keeps growing and we continue to hire people, fears of job loss are never a problem.”

Charlie Chaplin’s Modern Times film classic posed the comic genius as a factory worker locked in a losing battle with machines. Not so at Hella Mexico. It may be going too far to speak of a love affair, but, says Lopez, the workers get on well with the robots. “After all,” he says, “they save them from the boredom of meticulous but repetitive work.”

Robots in shape

The Tlanepantla plant, founded 40 years ago, has 1,000 workers, and an additional white-collar staff of 500, many of whom perform corporate duties that cover Hella Mexico’s other factory, which makes electronic auto-parts in Guadalajara, in west-central Mexico. Chief engineer Eric Monroy joined Hella Mexico five and a half years ago, shortly before the first robots arrived. “The plant then was about half the size it is now,” he says. “The robots look just the same as they did when they first came.” Still a young man, he sighs. “I’m the one who’s getting older,” he says.

> FACTS

- Grupo Hemex, an affiliate of Germany-based Hella, has plants at Tlanepantla on the outskirts of Mexico City and in Guadalajara.
- Hemex bought robots because of the need to improve quality for increasingly demanding clients. Productivity increases were a plus.
- The Tlanepantla plant has 44 robots, each of which operates as part of a small human team working on an individual product.
- The robots have improved productivity by 10-20 percent thanks to less wastage and down time. Quality and consistency are much better.