



>FACTS

Spot welding cell pumps up the production

A cell for welding rear-quarter subassemblies for the Ford Lincoln MXS typifies the collaboration between Ogihara and ABB. A special type of geometry-setting tool, a GEO end effector, was developed by ABB and first used for this project. Holding all the necessary location pins and clamps, it streamlines the loading of parts and greatly improves flexibility, eliminating the need for a re-spotting station and thus saving Ogihara floor space and equipment cost. The setup includes:

- FlexCell system. All components mounted on the base frame and wiring are integrated for maximum flexibility, safety and a smooth production process.
- Two ABB IRB 6600 robots with a 2.5-meter reach and a 175-kilogram capacity.
- Pedestal-mounted air-driven MFDC welding gun and projection nut welder.
- ABB Spotware computer software for customized application and ease of use.

**Ogihara Corporation at a glance**

- Headquartered in Ota, Japan.
- Operates 11 production facilities in five countries.
- Has 2,000 employees worldwide.
- It's U.S. plant, Ogihara America Howell, is a state-of-the-art, 800,000-square-foot facility in southeast Michigan for stamping and assembling high-strength steel and aluminum into body panels and subassemblies for car and truck manufacturers worldwide.

A strategy of innovation



"We found the ABB robot was a nice fit for us. It just snapped into place," says Steve Peca.

In today's tight auto market, innovation is the key to staying alive for U.S. auto parts maker Ogihara America Howell. In this ABB has a big role to play.

> Located midway between the U.S. auto manufacturing centers of Lansing, Flint and Detroit, Michigan, the Ogihara America Howell facility stamps and assembles automotive body panels. The plant initially served the U.S. big three: GM, Ford and Chrysler. Over time the fortunes of those manufacturers have declined. Yet Ogihara has continued to thrive and maintain a prosperous business. How is that possible?

To Steve Peca, the executive manager for projects and advanced engineering for Ogihara America Howell, it's no mystery. "What's kept us here is innovation," he says. "We're very good at inventing things. We're very creative, and our innovations keep us strong." The company has even shared a process it developed for tile manufacturing with NASA, which now makes all the space shuttle heat shield tiles using that process.

That confidence can be seen throughout the bustling 800,000-square-foot Michigan factory. Here 260 employees operate a wide array of high-

tech robotic cells, stamping and assembling high-strength steel and aluminum into body panels and subassemblies for such car and truck manufacturers as Mercedes, Toyota and Isuzu, as well as U.S. auto-makers. Those parts are shipped around the world, including to China, where Ogihara is currently building a new plant.

Says Peca, "We've come out with various processes and innovations that afford our customers better value than by sending jobs to low-cost countries. It's our innovation that keeps us alive, and ABB plays a big role in that."

ABB supplies Ogihara with robots, manufacturing cells and systems for welding, material handling and quality control. The plant's four assembly lines have used 20 ABB robots for the past five years. "ABB works out very well," says Kazuaki Miura, manager of assembly engineering at the Howell plant. "It has very good service." In addition, says Miura, robots pay for themselves in six months, and at half the cost

of a human doing the same job. "Robots don't take breaks," he says.

Especially important for Ogihara has been quality control and the ability to examine and measure assembled panels throughout the day. A year ago the company developed a white-light measuring cell using a Hexagon Metrology measuring device. According to Peca, it increased their efficiency 100 percent, doubling the output without adding manpower. The device can do a full scan of 12 parts per shift. An ABB 6600 series robot was integrated into the process.

Says Peca, "We evaluated many other robots, and some of the software was very complex. For some the support wasn't there. We found the ABB robot was a nice fit for us. It was easy to use, the controller was easy to program, and it integrated nicely with the new technology. It just snapped into place."

In fact, says Peca, "it's worked out so well that we've decided to populate our inspection cells with ABB robots." One more cell is being installed, and another is planned for next year.

Joe Bowen is ABB's global account manager for the Robotics Division. He works closely with Ogihara engineers to make sure installation and support of ABB products and "body-in-white" systems run smoothly,

as with the robot cell for spot welding Ford Lincoln subassemblies. (See sidebar). Bowen points out that the robots in the cell are placed onto raised base plates rather than being bolted to the floor. "This makes for quicker installation, and when this program is done it's easier for Ogihara to retool and reprogram," he says. "They can reconfigure the cells more easily."

Ogihara and ABB have a mutually supportive relationship. "ABB sees the potential in what we're doing, and they make a point to contribute," says Peca. "The accuracy of the ABB robot is great. The deliverables are outstanding, and there have been zero issues with their products. Everything works like clockwork with ABB."

Durability is also important in this business, and here Peca says an ABB robot shines. "It's robust and strong enough that after six or seven years of measuring, we can put it on an assembly line, and it will last another eight years hauling parts around, moving parts from point to point and saving a human from danger."

Looking ahead, Peca says that it's crucial to continue to develop new technologies in order to manufacture products more quickly and accurately than the competition. The future for Ogihara is definitely in high technology, he says. ☉