RobotStudio™

Case Study: APS – subcontractor automotive industry

APS is a young system integrator, situated close to where the Missouri and the Mississippi meet in America’s Midwest. The APS team has used RobotStudio, ABB’s off-line programming software, to gain the confidence and ultimately the business of Findlay Industries, GM Supplier of the Year, 2000.

“RobotStudio provides big credibility for small company.”

Jerry Nevins, CEO of Applied Production Solutions Inc., has developed his company in a very short time. After just 18 months in business, APS recently moved to a new, roomier plant outside St. Louis. Jerry sums up their philosophy: “We all have a background in manufacturing. We use engineering and technology to solve problems, and we succeed by providing solutions created from a manufacturer’s perspective.”

Before the move to the new plant, they had no experience of 3D simulation. But they were ready to make the commitment in order to strengthen their competitive edge.

Findlay, a hot lead

One of the problems of being a young company is that you’re often perceived as a risk for larger companies like Findlay Industries. Jerry explains: “We’d already quoted Findlay for a new dual robot water-jet cell that cuts out headliners (the soft ceiling inside the car) for GM’s new Chevy Suburban. But Findlay wasn’t ready to commit.” He was aware that Findlay’s Manufacturing Systems Manager, Bob Ette, wanted to catch-up with the competition by bringing in off-line programming. Since ABB’s automation software, RobotStudio, had a good reputation, Jerry decided to invite ABB to present their new automation technology at the opening of his new plant.

Opening the door to stability

The decision to let ABB play a major part was a big step for APS. During the RobotStudio presentation, Jerry saw the potential and decided to become an ABB Channel Partner. He remembers the moment well: “Both Bob Ette and I could see that RobotStudio was going to take the guesswork out of the proposed new water-jet cell installation. All of a sudden, we both knew that RobotStudio was the missing part of the equation.” At this point, Jerry and his team
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RobotStudio – the latest addition to the sales force
As most of the programming will be handled off-line (allowing a couple of days for adjustments), RobotStudio will have paid for itself by the time the new cell starts making headliners. Bob Ette goes even further: “Price really isn’t the issue. We’ve looked at systems far more expensive than this, but RobotStudio has the greatest potential. Beyond improved cycle time and increased robot life, I really think RobotStudio is going to help us bring in new business.” Perhaps the new relationship with APS and RobotStudio will help Findlay do more than catch up with their competition. Clearly it has helped APS to the next step on the ladder. Or as Jerry puts it: “Being an ABB Channel Partner with RobotStudio gives us virtually total credibility.”

A solution that holds water
By using RobotStudio to design the cell and create a program for two waterjet-cutting robots, APS was able to provide a watertight offer. Louis Byington, Vice President of Engineering at APS, describes the difference: “RobotStudio takes any guesswork out of the picture. Designing and simulating the new cell with the robots still in operation was the difference between guessing and knowing.” As Bob Ette confirms, this meant a great deal to Findlay: “The headliner cell will be running GM’s Suburban program and there’s a great deal at stake. Being able to channel GM’s data into RobotStudio and create the program before the cell is installed saves a lot of worry.”

What happened when virtual became real?
Once the new proposal was approved by Findlay, Louis was able to put theory into practice. The result? The design phase was cut by two weeks. Even cell size was reduced by approximately 18 inches in each direction, while maintaining an envelope of 20% more space than the robots actually needed. Understandably, Louis is most enthusiastic about achieving accurate engineering, not over-engineering. “RobotStudio guarantees accuracy,” he sums up.

FACTS AND FIGURES ON THE APS SYSTEM:

<table>
<thead>
<tr>
<th>Type of robot:</th>
<th>2400</th>
</tr>
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<tbody>
<tr>
<td>Controller versions:</td>
<td>S4 C plus controller</td>
</tr>
<tr>
<td>RobotStudio:</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>No. of units:</td>
<td>Two, one in the plant in Mexico and one in Bob’s office in St Louis</td>
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