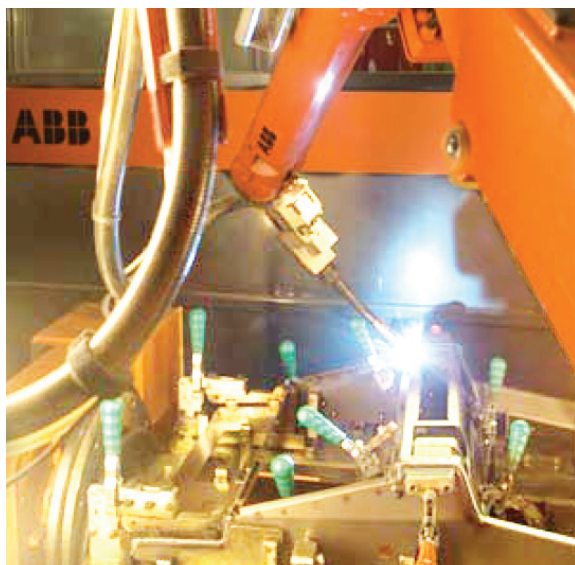


ROBOTICS

## A sure bet

### The way forward



With skilled labor becoming ever more scarce and expensive, Czech casino machine manufacturer European Data Project was looking for an alternative to “flesh-and-blood” welders. The answer? ABB’s FlexArc welding production system.

Czech machine engineer Václav Mácha is in no doubt where the future lies: “We bought two FlexArc welding robots from ABB last April, and it’s the best decision we ever made,” he says, grinning. “We’ll certainly be buying quite a few more as we expand our operations. If we want to stay in business, robots are the way forward.”

The signs are he’s right. As manager of European Data Project (EDP), a Czech-based manufacturer of high-tech slot gambling machines, Mácha is struggling to keep his 1,000-strong workforce up to strength these days. Like hordes of other light engineering companies that set up shop in the Czech Republic after democracy returned in 1989, EDP thrived for a long time on the fact that wages were generally low. Now, however, with the Czech Republic’s accession to the European Union three years ago, skilled labor costs are creeping up. “Times change,” shrugs Mácha. “We have to change with them.”

“We were successful from the start, but all this time, we’ve been running to stay in place,” says Radek Moškovský, EDP’s director of technology. With demand constantly rising, he explains, EDP has had to outsource half of its orders to other local companies, which, paradoxically, have become the competition.

“Our big problem has been finding and keeping welders,” Mácha elaborates. “We normally had to send new recruits on welding courses. Then, once they had been trained at our expense, they’d be tempted away to work at one of these other firms. It was maddening.” Eventually, Mácha and his fellow managers decided it was time to bring in the robots. After holding a tender among four different suppliers, EDP went for ABB’s FlexArc system.

A complete arc-welding package, FlexArc boasts all the components necessary for robotic arc welding. The IRC5 robot control system supports the coordination of multiple robots, positioners and welding equipment. In fact, Mácha reports, the three men needed to operate one cell do the work of eight skilled workers in 30 percent less time.

All internal cables were routed and connected in EDP’s factory, and all the components of each unit are mounted on a common base, eliminating the need for on-site engineering work. Software was preconfigured for a simple setup.



“Really, we just put the cells where we wanted them and connected the power cable, air pressure and shielding gas,” explains Moškovský. “The computer did the rest. All the FlexArc operators really have to do is load the gambling machine components and press a button; they don’t need to know much about computers themselves.”

That’s because the position of the different components of the gambling machine units is calculated by a macro program according to a pre-defined pattern, which is entered in a menu in the robot’s programming box. EDP produces several different lines that require different specifications, Moškovský says, and a key reason that EDP chose FlexArc was because its all-inclusive, user-friendly design makes for an easy turnaround.

#### **Benefits**

- Capable of handling almost all phases of the
- production process
- Higher system uptime
- Automatic definition of tool centre point (TCP)
- Automatic check/update of TCP
- Fast recovery after weld stop
- Cell can stay in automatic mode
- Maintenance conducted from outside cell
- No need to know programming.