Italian automotive supplier Ranger’s new paint line features robots that have reduced production times by 50 percent.

When Ranger, an Italian automotive supplier working with Audi, BMW, Porsche, Maserati, Volkswagen, Ferrari and others consolidated its painting line activity, it realized that it was no longer financially feasible to work so much manually. Despite highly qualified workers, it was impossible to achieve the consistent high quality needed. “At that point, everybody agreed that the corporate objectives were no longer compatible with manual painting and therefore it was decided to switch to robotics,” says Ranger engineer GianLuca Ceppi.

“Some time earlier, a painting division was bought from a neighboring operating company, which used ABB robots, but without knowing them or using their full potential. This lack of know-how convinced us to start from zero instead of reorganizing the production department of our plant.” In operative terms, this meant training existing staff who were experts on the painting process but unused to this kind of automation. The company also decided to hire new technicians, unfamiliar with the process, but open to innovation represented by the use of robotics. “Cooperation of staff knowing the process with the new staff turned out to be the winning choice,” says Ceppi.

**Off-line training**
A development center with a robot for off-line programming was created, which means production lines are kept running to the maximum. The off-line robot serves also as a learning and training center for operators, permitting to shorten start-up times and avoid removing essential tools from production. “With this solution, we managed to avoid hours of overtime training and, most importantly, we managed to develop about eighty programs in slightly less than two months, putting them immediately in production,” says Ceppi.
Increasing production efficiency

Today, the department consists of two lines, a completely automated primer line, where the first layer is applied, and a four-station finishing line (three robot stations and one manual station), two for application of enamel and two for application of the final polish. Three stations are operational and devoted to automatic painting of large surfaces.

When the automation project was launched, Ceppi says, the objective was to improve painting productivity and technology, doubling sales and maintaining the same employment level, and possibly reducing the cost of raw materials. The number of application stations had to be doubled based on this. Ultimately, the robots reduced the production times by half. Waste of raw materials was also key thanks to the possibility of automatic control of paint thickness in order to make it uniform.

FACTS

Benefits for robots at Ranger
- Greater consistency
- Halved production times
- Less waste of raw materials
- Better environment for employees
- Web site: www.ranger.it

ABB Robotics
www.abb.com/robotics