

RobotStudio™ Case Study: Benteler Automobiltechnik



Benteler Plant in Paderborn supplies automotive parts to all major car manufactures world wide.

Benteler Paderborn was the first Benteler automotive plant. Today is the plant one of the biggest Benteler plants worldwide with 1500 employees. Their business is not only one of the largest automotive suppliers but also one of the most important steel tube manufactures in Europe.

Benteler cuts downtime

At the Benteler plant in Paderborn 380 robots are used in the area of mig welding and material handling. Benteler produce complete axles and form parts like the B-columns and door reinforcements for various automobile manufacturers. They also have a small pipe businessarea for which they produce fuel lines and coolant lines made of aluminum for Porsche and other car manufacturers. Benteler has been using RobotStudio for almost three years now.

Cutting downtime

Werner Poetsch is responsible for the area of robot technology: "We have decided to use RobotStudio to shorten the initial operating time on site. One of the problems in production was that when we added new products, production had too much downtime. With RobotStudio we can determine the exact location of the robot and we shorten the downtime because we can simulate things ahead of time. Thanks to this we are sure that the process will function correctly and we are able to minimize initial operation times."

Problem solving offline

"RobotStudio has reached a high level of acceptance at Benteler, especially in the area of construction. It is an additional tool for the people in construction. RobotStudio is used for checking their construction directly on the robot, and, if problems remain, to remove them ahead of time. That is before the tool is actually made of steel and iron", explains Werner Poetsch.

Benteler Automobiltechnik

Qualified testing

Peter Smith is in charge of robot programming and simulation at the Paderborn plant. He has been working with RobotStudio for two years; "Before we got RobotStudio, I always programmed the robots online. Or we could say, partially offline in the Editor and then afterwards online for start-up. Today we test everything in RobotStudio, all signal connections, logistics functions and also when we have developed something new."

Shorter start-up time

A lot has changed constructively at Benteler since they began to use RobotStudio. Processes like layout creation, position of the robots, picking and storing has become easier and more efficient. Peter Smith quickly found his way into RobotStudio and could work with it fairly well after about three months of self studies. "One of the advantages with RobotStudio is that I can immediately test developed programs offline without having to stop the systems. This gives a much shorter start-up time", says Peter Smith.

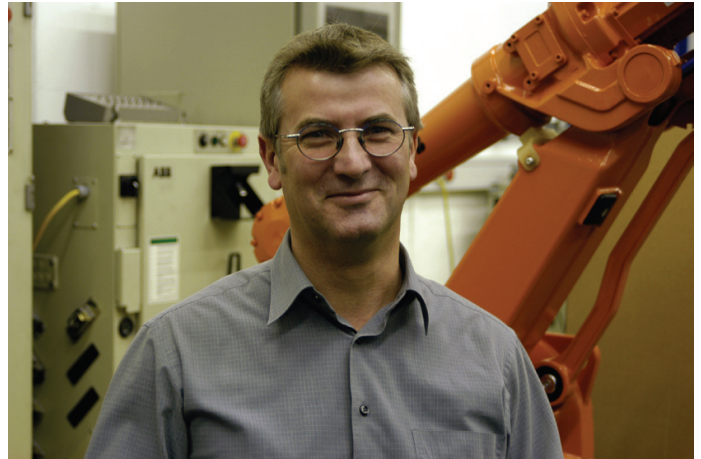
Audi jets

Peter Smith gives us an example: "We had a job for jets to Audi. For this project we only had a long weekend of start-up time. The job involved several processes: remove containers from the station, remove the jet line from a pallet, and solder. After that, the line was set onto an assembly and then moved to an oven. The problem was that we had very little time and the space situation was very crowded. Without RobotStudio, we probably wouldn't have been able to make it. Unless not without involving a lot more people in the project."



"RobotStudio gives a much shorter start-up time".
Peter Smith, Robot Programmer.

Werner Poetsch agrees; "Thanks to RobotStudio we can check many things ahead of time and I have to say that it is certainly an advantage for us. We can also design the program organization, simulate the process, and take care of many things, which we had to do on site in the past."



"RobotStudio has reached a high level of acceptance at Benteler."
Werner Poetsch, Robot Technologies

The investment has paid off

Peter Smith use the API function in RobotStudio to make his own macros. Thanks to the virtual controller he can download the program to RobotStudio and it really works. "I do modeling in RobotStudio as well", continues Peter Smith and show a Benteler tool changer that ha just made. "The investment in RobotStudio has amortized for us. We have been using the system successfully for two years now. Although we haven't made any specific payback calculations I am sure that the system has been profitable for us", concludes Werner Poetsch.

More offline programming

Both Werner Poetsch and Peter Smith see great opportunities for RobotStudio in the future. "We want to try welding, gluing, and image rocessing with RobotStudio in the near future," says Peter Smith "I feel that the area of offline programming will greatly increase. That's why it probably won't be the last license we have purchased. I am sure that we will do more with offline programming in the future", finalizes Werner Poetsch.

ABB Robotics

www.abb.com/roboticssoftware