

Flexibility required

Megatec: Six-axis robot performs complex tasks in “door strip” project

Megatec from Lüdenschaid, Germany, is a specialist for high-quality, coated, two-component parts. Ninety percent of its customers are from the automotive industry, including the best-known premium brands. For automated production of a backlit door strip in the Audi A4, a six axis robot featuring the SELOGICA user interface was used for the first time.

“Our customers’ requirements are becoming ever more complex. One good product example are visible strips for ambient lighting in the Audi A4. These flash red as soon as a cyclist or other obstacle is detected in front of the car door,” explains Patrick Ferber, Sales Director at Megatec Kunststofftechnik GmbH. His colleague, Peter Zöllig, Director of Plastics Technology is also highly satisfied with the ARBURG solution: “We’ve jointly implemented an outstanding two-component system in only a few months. We’re working with a single data set to control the entire production cell. Here, we’re also using a six-axis robot for the first time. We only gained the confidence to take this step after having gathered experience in the use of linear MULTILIFT robotic systems since 2015. Operation of the six-axis robot is equally convenient thanks to the standardised SELOGICA user interface.”



Two-component ALLROUNDER produces strips from PC and ABS.

The component is manufactured on a two-component ALLROUNDER 630 S with a clamping force of 2,500 kN, the two size 290 injection units of which are arranged horizontally and vertically. With the aid of a 2+2-cavity mould, the pre-moulded part and the finished moulded part are produced from PC and ABS respectively in a cycle time of around 45 seconds.

The six-axis robot removes the moulded parts and sets them down in trays of 18 parts each. “Their positions in the tray are alternately rotated through 180 degrees. Moreover, the two strip versions for the left and right car doors are set down in different trays, which are provided via two

separate conveyor belts. With this task, the flexibility of the six-axis robot can be exploited to the full,” explains Andreas Armbruster from the ARBURG Project department.

In a second plant belonging to parent company Gerhardt, the visible parts are subsequently electroplated. The advantage here is that the chrome layer only adheres to the ABS material, while the PC component remains transparent and can be backlit.

“We’re planning to produce around 65,000 units of this part a month in three-shift operation,” adds Patrick Ferber. He goes on to explain that machine availability is therefore critical. Here, ARBURG also excels by virtue of its first-class service. From the company’s Radevormwald



The two-component door strips (photo above) are produced on a turnkey system featuring a six-axis robot (centre photos).

The system was put into operation by Megatec Director Peter Zöllig (left) with Andreas Armbruster from the ARBURG Project department. Megatec Director Patrick Ferber (photo below) plans to achieve an output of 65,000 units per month.



worked all the machines at its injection moulding production facility by means of the ARBURG host computer system (ALS) since June 2014. This ensures end-to-end traceability as is increasingly required by the automotive industry.

location, a service technician can be on-site in Lüdenschaid at very short notice if required.

Central ARBURG host computer system

For order planning and recording the process parameters, Megatec has net-

INFOBOX

Company: Megatec Kunststofftechnik GmbH
Plant: Lüdenschaid, Germany
Employees: 43
Turnover: 4.5 million euros (2015)
Machine fleet: 23 single and two-component ALLROUNDERS with clamping forces from 500 to 3,200 kN
Competencies: Injection moulding, design, mould construction, surface coatings (electroplating)
Industries: Automotive, electrical and sanitation industries
Contact: www.megatec-kunststofftechnik.de