

Robot cell compensates for shortage of skilled workers



Welding equipment distributor Jörg Engelmann, 2nd from left, from Lennestadt, Germany, sees the shortage of qualified welders in his region as an opportunity to use robotic welding cells. Other teammates: Norman Schäfer; to the right of Jörg Engelmann: Lucia Bockheim and Yvonne Müller.

Over the past two decades, Engelmann Schweißtechnik GmbH has successfully established itself as a welding technology dealer and service provider in the Sauerland region. Managing Director Jörg Engelmann, as welding expert and founder of the family-run company with around 10 employees, can personally look back on 30 years of experience in application technology.

The catchment area between the Ruhr region and Marburg is mainly home to medium-sized industries, including a few suppliers to the automotive industry as well as smaller processing companies such as locksmiths, sawmills and drop forges. Companies that, according to Jörg Engelmann, are still extremely productive in terms of welding technology: "Some of these companies tend to suffer greatly from a lack of skilled welding personnel. In addition, larger production runs can no longer easily be completed using the manual welding process. Neither in a given time nor with consistently high quality."

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Jörg Engelmann and his team noted that, in addition to the shortage of skilled workers, small and medium-sized companies also face particular challenges regarding the realization of larger welding orders.



The operator of the Easy Arc robotic welding cell from OTC DAIHEN, Norman Schäfer, teaching the welding sequence: "Programming is easy with a little welding experience".

On the other hand, it can be observed that, in addition to the personnel problem, there is currently an increasing reluctance to make large investments "for pandemic reasons" when it comes to getting the production problem under control with automation technology permanently.

About two years ago, welding automation manufacturer OTC DAIHEN EUROPE established contact with Engelmann and introduced the concept of the EASY ARC robotic welding cell to the distributor. "At that time, we were already well positioned for conventional applications due to our sales partnership with a welding equipment manufacturer, but we were still looking for a viable and, above all, affordable solution for automated, robot-based processes in the interest of our customers," says Jörg Engelmann.

Previously, the welding distributor had looked into a welding robot solution, but it was offered without an enclosure and was not CE-compliant, but this was too critical for the owner as a sales solution in the long run. "We needed a concept for our customers that worked properly right from the start and offers appropriate safety standards. A non-CE-compliant cell without an enclosure would have

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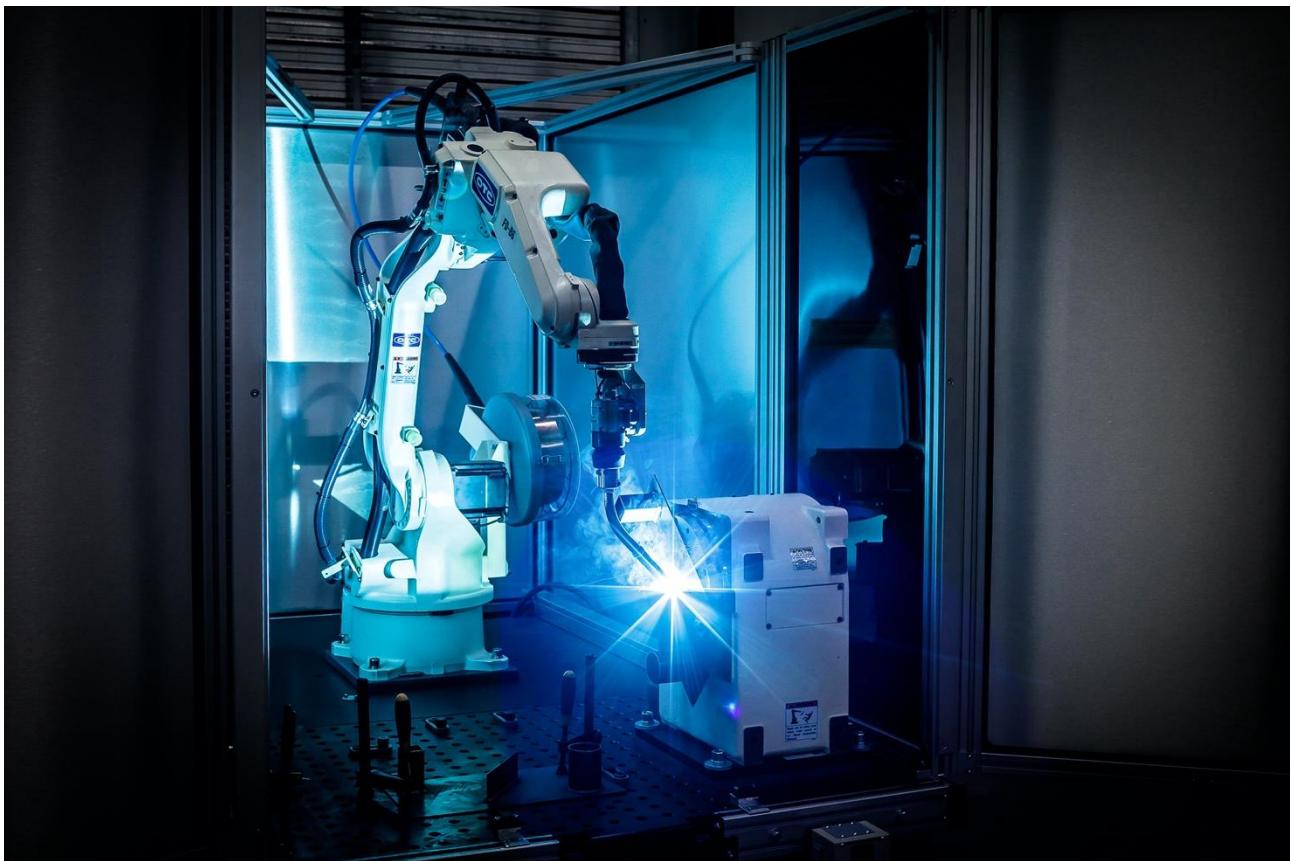
required too much effort from us when retrofitting. The solution we first considered was also a one-way street in terms of programming: The transition to a larger welding robot would have required a completely new start in terms of application technology, which we did not want to impose on any of our customers. With the welding robot cell from OTC, you can build directly on knowledge once acquired."

Engelmann was very enthusiastic after the presentation of the EASY ARC robotic welding cell, which is CE-compliant from the outset and ideal for entry into full automation, and has now been a permanent sales partner of the Japanese manufacturer for two years. "To cover the needs of many smaller operations in our catchment area, OTC's EASY ARC was exactly what we were looking for," explains Engelmann. "We realized quite quickly that the cell was an affordable, yet high-quality entry point into robotic welding for these sizes of companies."

Welding distributor also supports in production bottlenecks

Not every workshop that has to weld 200 consoles wants to or can fulfill the dream of its own robotic welding cell right away. That's why Engelmann not only presents the EASY ARC to potential customers at its location for sale, but also offers it to potential customers for rent. If that still doesn't fit into the operating concept or if you are also facing time bottlenecks, Engelmann can also provide you with production support without further ado.

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The Easy Arc robotic welding cell also benefits Engelmann customers who are facing spontaneous capacity bottlenecks and would like to take this opportunity to get to know the system better first.

"At the same time, we always clearly communicate here that we are not acting as a competitor to our customers. Instead, we help them out at short notice on request through the production options with our own EASY ARC cells, for example in the event of deadline bottlenecks or overcapacities. Some time ago, we relieved one of our customers with the production of a quantity of 20,000 parts, which was already reaching its capacity limits in three-shift operation. Of course, we offered him the opportunity to personally inspect the quality management system on site. In the end, everything worked out wonderfully."



Workpieces or components for the agricultural machinery sector with batch sizes of 100 or more are the common application examples processed via the welding robot cell.

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Engelmann Schweißtechnik attaches great importance to quality anyway, as welding certification according to ISO 3834 is currently being prepared in addition to the ISO 9001 certification acquired. The EASY ARC welding cell from OTC with welding robot, rotary positioner and inverter welding power source and control system, which is ready for demonstration, is to be joined by further automation units in the future, explains Engelmann:

„In addition to the expansion of service and field service, we would particularly like to expand the area of application technology consulting for our customers and robot rental. The necessary provision of further units in our plant has been agreed with OTC, as has the holding of "open day"

events to demonstrate the welding robot cell to representatives of local companies for a wide range of tasks directly on our premises.“

Control panel of the welding robot cell. The Easy Arc can also be optionally equipped with a positioner (right side in the background).



As soon as the regulations for holding such events are relaxed again, we're already looking forward to putting our planning into action.“ According to the man from Sauerland, the learnability for operating the welding robot cell should be easy: "What can't be learned by hand is not for the hand," is Engelmann's guiding principle. "A welder should be able to learn it within 1-2 hours. With the Easy Arc, it works."

Easy Arc welding robot cells from OTC can be configured for MIG/MAG as well as TIG welding. The respective package solutions offer the possibility to equip the cell with an additional horizontal rotary positioner incl. Synchromotion software as well as further features on request.

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Image gallery (more selection motifs):

