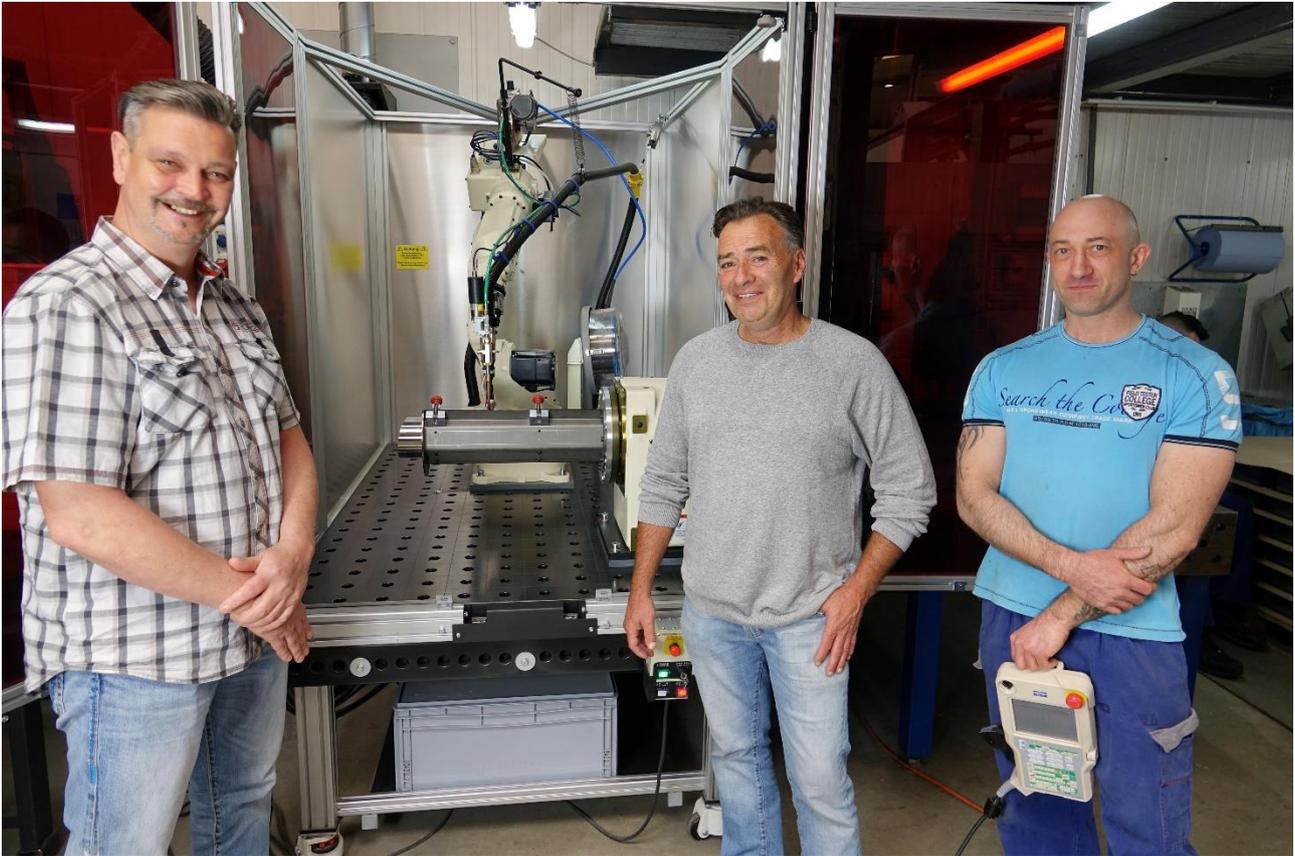


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Eyecatcher for e-mobility:

Charging columns from the welding cell



The OTC's EASY ARC welding robot station at hesotec electrify gmbh plant in Dinslaken. (From left: Michael Krone from Krone Schweißtechnik und Industriebedarf and managing directors, Georg Hellmich and Björn Amendy).

While the subject of electromobility is increasingly preoccupying the automotive industry, the required e-charging stations in public parking spaces are already gaining ground in many places.

A development which Georg Hellmich, Managing Director of hesotec gmbh, based in Dinslaken, has also been following closely from the outset. The company, which in 2003, initially specialized in sheet metal and tube processing for the construction of shops and commercial vehicle component, joined the general trend towards electromobility and incorporated the experience gained over the years into the construction of charging stations.

Together with his son Sebastian, the entrepreneur developed a charging station product line via hesotec electrify gmbh, which was specifically founded for this purpose. These charging stations are equally attractive for both commercial and private customers and, unlike many competing products,

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have an extraordinarily slim and space-saving design. The activation of the charging devices can be done via app, RFID, or terminal.

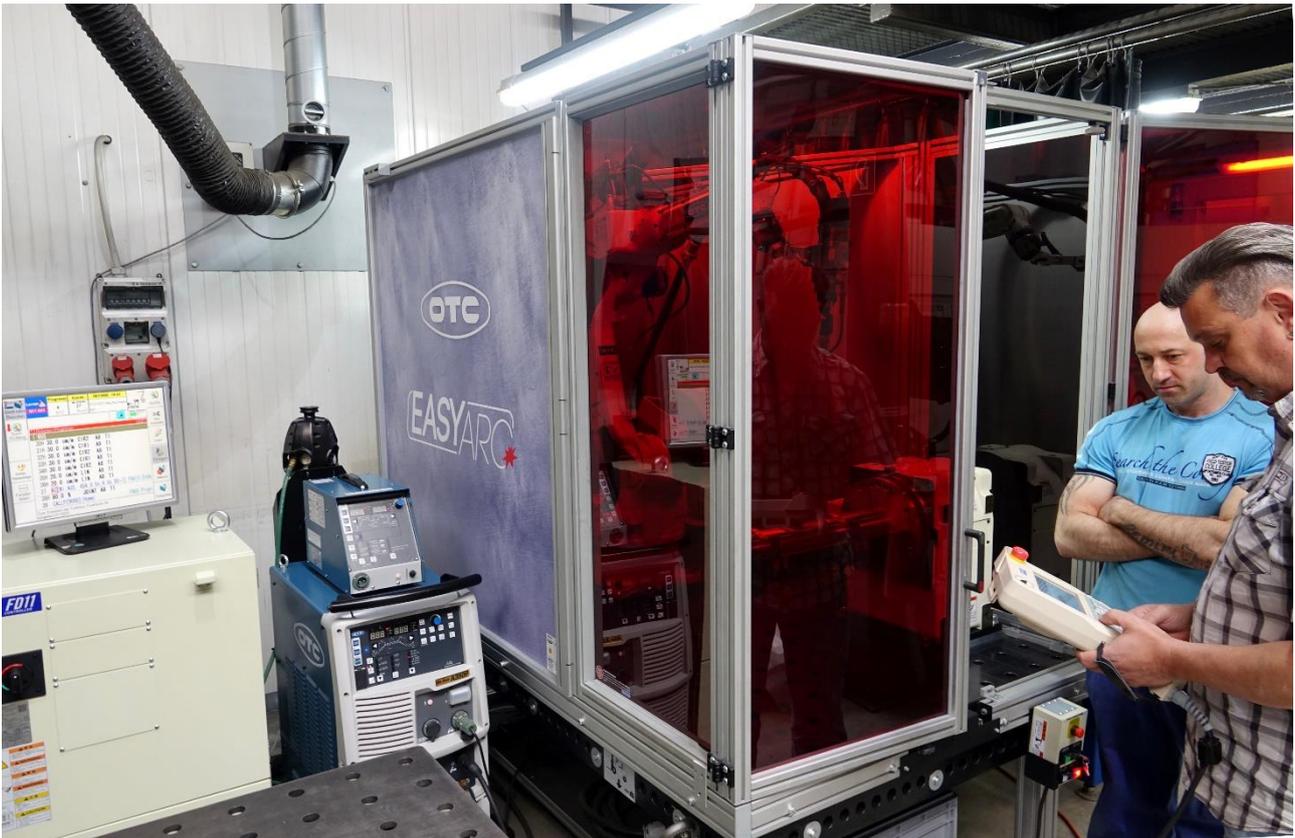


Georg Hellmich presents parts of the finished body of these charging stations in the standard version made of brushed stainless steel. The recess for the plate to be welded on later for the electronic inlay is clearly visible here. An automated TIG welding process in OTC's EASY ARC robot welding cell, is used to join the plates for the charging socket inserts to the body.

During the implementation of the new production line, the company benefited from its many years of experience in sheet metal processing, but was looking for an automated production solution to produce a seamless connection between the cut-to-size charging column tube and the weld-in sheet for the electronic inlay.

"Firstly, we tried to achieve a gap-free result here by means of manual welding as well as with our laser welding robot cell. Due to the increased effort and the high material tolerances, however, we were increasingly confronted with scrap production and time-consuming reworking. Since process stability is particularly important to us, we looked for an alternative solution", explains Hellmich.

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The programming of the EASY ARC welding station from OTC DAIHEN EUROPE at hesotec electrify gmbh in Dinslaken. The FD-11 OTC controller (far left) and the water-cooled Welbee A350P OTC power source (center) are part of the overall package.

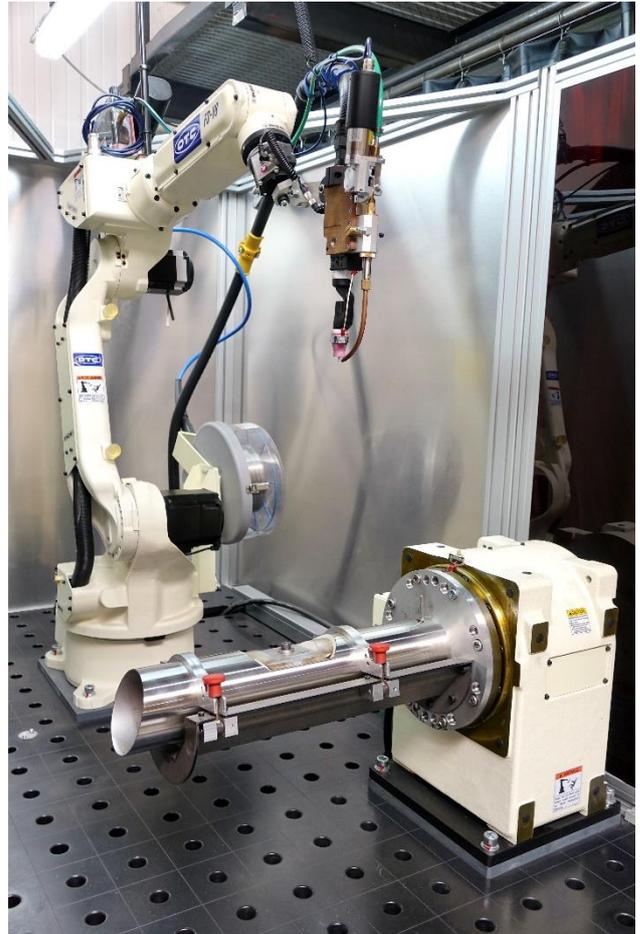
In April 2020, hesotec electrify decided, via the specialist welding dealer Krone, to purchase an EASY ARC welding robot cell from OTC DAIHEN EUROPE to be able to automate the precision work in this regard. The mobile station in this version includes a Welbee A350P TIG welding power source, the FD-V8 welding robot, a welding table for holding clamping elements and a horizontal rotary positioner. The FD-11 control unit and the modular safety enclosure completed the package of coordinated components. Initially, Hellmich was primarily interested in a short-term and trouble-free start of production; with this being confirmed by his responsible welding specialist dealer, Michael Krone, in an interview:

"The recommendation for the EASY ARC welding station with TIG welding system was obvious here. The collation of individual system components would have been comparatively very time-consuming and could easily have resulted in major compatibility problems. Precisely because the start of production for the series had to be quick and smooth, the decision was made in favor of this robot cell. Once set up, each operator can immediately start work and then use or expand the welding station for other applications".

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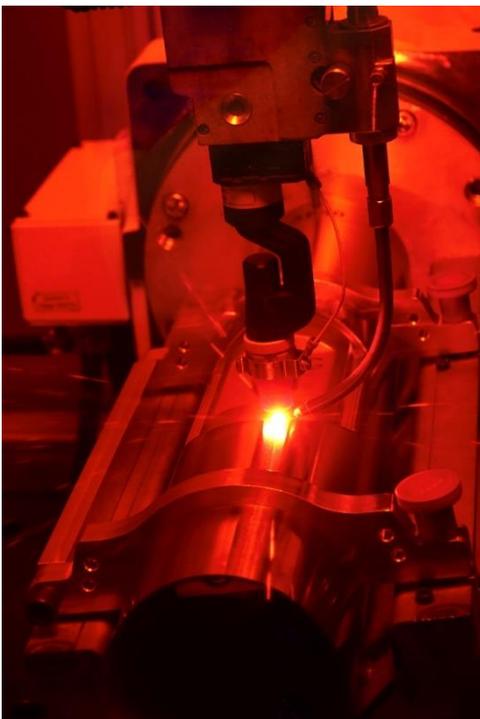
"This flexibility in particular was an important reason that saw us opting for the EASY ARC welding station from OTC", added Georg Hellmich. "We needed a complete solution for TIG welding at an attractive price that could be later modified and expanded, when switching from individual to series production.

Initially, however, the speed of commissioning was our main concern. We now sell our charging columns in six countries across Europe. Just recently we produced 400 charging columns with the EASY ARC for a customer in Denmark. Thanks to the logical structure and the easy handling for our experienced welders, the complete training only took two to three days and did not require any external training.



The column section clamped in the positioner device of the EASY ARC welding robot cell with the sheet metal to be welded

Thanks to the excellent welding properties of the EASY ARC and the easy training, we were able to produce 100 charging columns per shift and supply our customers on time. This was also an absolutely inexpensive solution for individual or small series production".



Since the contract production for the Danish customer, more have already been added 4 months thereafter. After the development of its products, the still relatively young hesotec electrify gmbh had to face the constantly changing challenges of electromobility in terms of approval – particularly in ensuring compliance with calibration law - while the demand for the new technology was already noticeably increasing at the time of its foundation.

Automatic welding of the insert plate to the charging column: The 6-axis welding robot, FD-V8, from OTC within the EASY ARC cell works reliably; Safe monitoring through the side wall of the modular housing.

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Stainless steel charging columns with the plate welded using Easy Arc and the already assembled electronics.

Some unusual examples of the possibilities in the design of the e-charging columns (in the picture: copies of the eSat r10 model) decorate the company's training room in Dinslaken.



"As of today, we are seeing growing interest from public bodies such as cities and municipalities. In addition to commercial companies, however, the private sector is equally on the rise. From space-

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saving and cost-effective wall boxes for wall mounting - for example in the company's own garage - to attractive charging points with a charging management system and W-LAN connection with 11 or 22 kW charging capacity, we have something for every taste and application.”



Georg Hellmich's vehicle charging in the company's parking lot, at one of the modern charging columns/stations produced in the company (in the picture: the eSat r20 model).

Since the number of new registrations of electric cars in Germany in 2019 has already doubled compared to the previous year, and the figures for the half of 2020 also show a positive trend despite the tense economic situation, Georg Hellmich and his employees will probably not complain about a lack of orders for the time being.