



Concentrated welding expertise

Largest welding competence centre in Europe

The CLOOS application and process development department offers feasibility studies on customer components, the creation and optimisation of robot programs and advice on the selection of the optimal welding technology. Thus, it plays a central role in the development of customer-specific welding solutions and new welding technologies.

Many years of know-how meet the latest technologies

„In our welding competence centre, our specialists develop efficient solutions and innovative welding technologies that are tailored to the individual needs of our customers,“ says Christian Paul, head of application and process technology development at CLOOS, who has continuously expanded the department since the beginning in the 1980s. Today, the department consists of 22 employees who always get the best out of the arc for customers in an area of 1,500 m². The specialists use the latest technologies for manual and automated welding. Whether TIG, MIG, MAG, plasma or laser hybrid - the competence centre covers the entire range of welding technology and can process all materials. Innovative processes such as additive welding are also used and continuously developed at CLOOS. A total of 12 robot systems with various peripheral equipment are available for tests and demonstrations. Complex components with a length of up to 6 metres and a weight of up to 4 tonnes can be processed there.

With their comprehensive know-how, the specialists advise customers and colleagues on the selection of the optimum manufacturing process, welding process

and welding technology.

The employees have extensive experience in the areas of welding, brazing, cutting, burning, brushing and cleaning, in the optimum selection of parameters, the properties and influences of filler materials and gases as well as in the many possible applications of sensor technology. „In 1986, we already used the first laser sensor for online seam tracking on a 10-axis robot system,“ Paul recalls. „Today, we can ensure the best possible weld quality with tactile gas nozzle sensors, arc sensors and online and offline laser sensors.“

In addition, the topics of digitisation and networking are also playing an increasingly important role in application and process development. Thus, all robot systems are networked with each other and equipped with the CLOOS digitisation platform C-Gate.

Focus on the optimum customer solution

A central task of the CLOOS application technology are feasibility studies both of the welding technology and with regard to the automation of production processes. Even before the actual start of production, CLOOS carries out extensive tests on customer components. „Efficiency potentials, cycle times, areas of application: All parameters are checked,“ explains Paul. „In this way, our customers find out at an early stage in which period their investment will pay off.“

During live demonstrations, users can directly find out more about the various welding options for their individual component. There are daily demonstrations in the CLOOS competence centre.



In addition, the employees create and optimise robot programs with regard to accessibility, torch and axis position, welding speed, reduction of spatial paths as well as the selection of optimum welding parameters. This also includes offline programming and computer-aided simulation.

The specialists provide advice not only in the CLOOS competence centre in Haiger, but also directly at the customer's site. Among other things, the QINEO tour bus is used here which is equipped with the latest welding power sources. So, users can try the QINEO welding power sources immediately and find out about the individual configuration options and areas of application.

Advance welding research

As a technology driver, CLOOS also supports research projects and research institutions in the field of welding technology. The recently completed StaVari project, for example, deals with additive

manufacturing processes for complex products in a variety of highly functional steel constructions. In the StaVari project, CLOOS is responsible for the areas of joining technology and quality assurance for tolerance compensation.

„With this we want to promote innovative developments in the entire industry and further improve the welding solutions both qualitatively and economically,“ Paul sums up.

