Success Story

Safety in focus

CLOOS robots weld children's vehicles by Puky

CLOOS

Weld your way.

HAIGER/WÜLFRATH – Puky has always represented "unique safety" in children's vehicles. In the case of welding, the company has trusted in technologies by CLOOS for many decades. Recently, Puky put two new QR-CC-6 compact cells by CLOOS into operation where the QIROX robots weld the handlebars and frames for the children's bicycles. The use of the two new compact cells guarantee a high process reliability and an excellent product quality.

Puky GmbH & Co. KG has more than 68 years of experience in the development, construction and production of vehicles for children. Since its foundation in 1949, the company has steadily grown, at first with the brand name Puck and from 1956 on with the name Puky. With more than 110 employees at the headquarters in Wülfrath Puky produces more than 700,000 children's vehicles per year. The product range comprises small ride-on vehicles, tricycles and learner bikes as well as 24" bicycles. All vehicles are designed, constructed and produced in Germany.

Photo 1: The CLOOS robots weld the frames and handlebars for the children's bicycles by Puky.

Safety is the first priority

The Puky vehicles have a high-quality, well-thought-out and child-friendly design. "Safety is our top priority", explains Florian Guss, Industrial Engineer at Puky. Thanks to the high quality standard, the Puky vehicles have a high resale value. To ensure the high product quality Puky has its own monitoring and test laboratory. Furthermore, the production is oriented at the Kaizen system with which the production processes are continuously optimised.

Automated welding with flexible compact cells

Due to increasing quantities Puky has strongly invested in automated production technology for the last years. In the past, the vehicles were all welded manually. For the production of the bicycle handlebars and frames Puky now works with two QR-CC-6 QIROX compact cells by CLOOS. These are turnkey systems and dispose of a 2-station workpiece positioner with horizontal change and turning and swivelling movement. The loading area is protected by a lateral safety fence and a light barrier during the cycle. All robot and positioner axes are fully synchronised.

Maximum process safety at high flexibility

The two CLOOS systems are currently used to the full in two-shift operation. The robots of one compact cell are welding about 140 bicycle handlebars per hour.

Photo 2: Because of the two-station design, the machine can be charged alternately – an enormous saving in time for the process run.

Due to the change to automated welding, Puky is now able to further increase the safety of the production processes. Thanks to the exactly reproducible welding results the expenditures for reworks could be reduced considerably. Besides, the company benefits from the flexible application possibilities of the compact cells. Bicycle handlebars and frames can be welded on both systems. In addition, the welding robots can be used spontaneously for other components and also for small batch sizes. "As the product life cycles become shorter and shorter we need systems which can be flexibly adapted to our components," explains Guss.

Photo 3: The welding robots guarantee a constant process quality.

Last but not least Puky could considerably increase the production capacities by means of automated welding. Thus, the company does not longer depend on subcontractors and suppliers. As they now produce according to their needs, they could also reduce the inhouse inventory significantly.

Single source supply

CLOOS trained the Puky employees comprehensively to familiarise them with the new systems. "We estimate the easy operation of the robot systems," says Guss. Even employees with less robot experience could quickly familiarise.

Puky completely trusts in CLOOS regarding welding. Beside the two robot systems, they also work with more than 30 manual welding power sources of the Haiger welding specialists. On-the-spot support is provided by long-standing CLOOS sales and service partner Lixfeld Schweisstechnik which guarantees short reaction times.

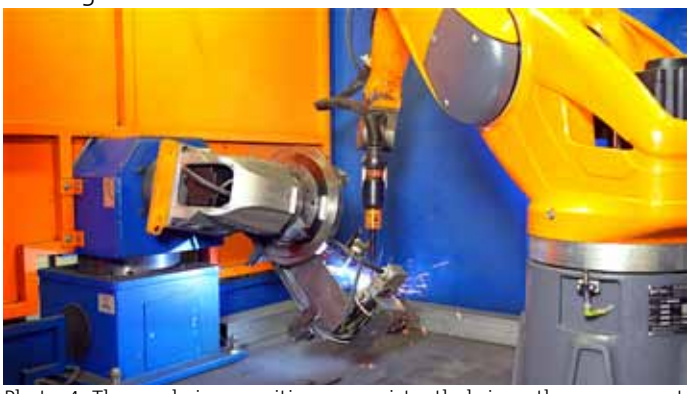

Photo 4: The workpiece positioner consistently brings the component into the optimum welding position.

"Starting from the planning with extensive tests of sample components in the CLOOS Technology Centre in Haiger over design up to production and service, CLOOS as market leader in the field of welding technology offers everything from a single source," emphasis Guss. "From the beginning we have been cooperating very faithfully and are looking forward to continuing this in future."

Photo 5: The vehicles must have perfect weld seam in order to fulfill the high safety standards.

Video 1 on CLOOS TV

Video 2 on CLOOS TV

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