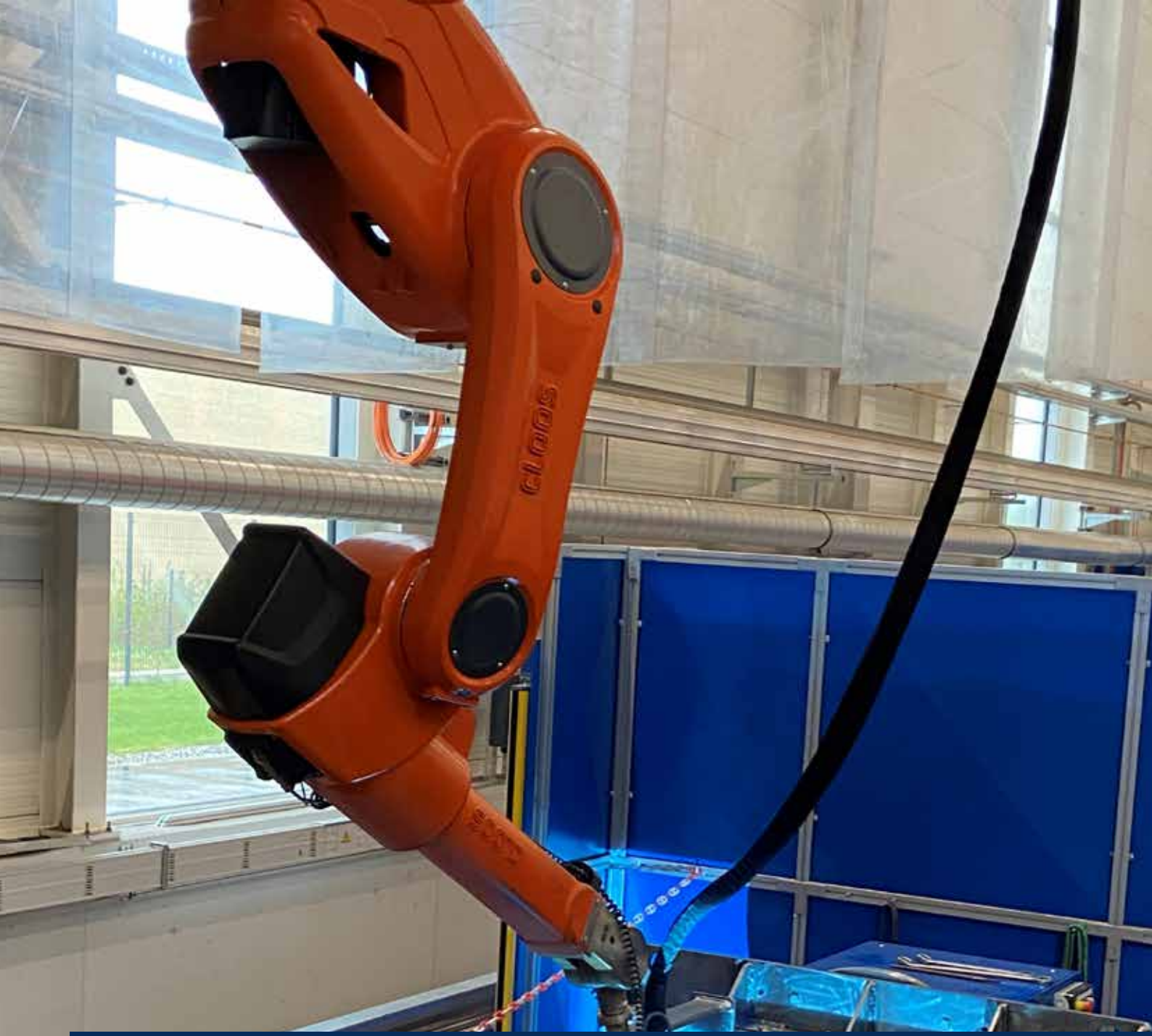

Success Story

CLOOS robot welds at Stöcklin Logistik

Automated welding system ensures product quality and increases production efficiency

CLOOS

Weld your way.

HAIGER/LAUFEN, April 2021 - Since the end of 2020, Stöcklin Logistik AG has been welding lifting platforms and mast modules for stacker cranes with a new 2-station robot system of Carl Cloos Schweisstechnik GmbH. The specialists for intralogistics systems and software as well as for forklifts moved to a new location last year and invested heavily in innovative manufacturing technologies. By switching to automated welding technology, Stöcklin was able to significantly accelerate production processes, reduce non-productive time and raise the product quality to a new level.

Individual total solutions for logistics

"As a manufacturer of complete storage and logistics systems, we have been planning, projecting and implementing turnkey systems tailored to individual customer needs for more than 80 years," says Peter Voser, who as a member of the Executive Board at Stöcklin is responsible for the Supply Chain Management and Production divisions. "Our goal is to strengthen the competitiveness of our customers on a long-term and sustainable basis."

Whether automotive, pharmaceutical, food, mechanical engineering or general industry - the Stöcklin logistics systems are used in all industries. Due to the ongoing COVID 19 pandemic, the company recorded a strong increase in orders, particularly in the e-commerce sector. "High availability of the systems is of enormous importance for all our customers," emphasises Voser. To ensure a quick response in the event of service, Stöcklin has numerous subsidiaries and service partners worldwide. In addition, customers are directly connected to the company headquarters via a remote system in order to rectify any errors easily and quickly.

Photo 1: Stöcklin has been using the new robot system at the new site in Laufen since mid-2020.

New location with innovative production technologies

The company has 550 employees worldwide, 350 of them at the main site in Laufen. The move to the new company headquarters took place in May 2020. When building and equipping the three production halls with a total of 10,000 sqm, Stöcklin attached great importance to innovative production technologies and sustainability.
For example, the production line for the manufacture of mast modules for stacker cranes was completely redesigned in this course. In addition to a new laser cutting system and a new processing machine, the welding technology should also be modernised and automated. "With CLOOS, we have found a reliable and competent partner who supplies us with all components for a complete automation solution from a single source," says production manager Morand Gaisser happily.

Flexible 2-station robot system

The new robot system consists of two stations that can be used flexibly for different components. On the larger station, the robot welds various mast modules that can vary in length from 3 to 11 metres. The individual components weigh up to 10 tonnes. When assembled, the masts can later reach a length of more than 40 metres. On the smaller stations, various smaller components such as lifting platforms are manufactured. Due to the 2-station principle of the robot system, it is possible to insert the components in one station while the robot is welding in the other station – an enormous saving of time in the whole process run.

Both stations are equipped with workpiece positioners, each of which has two vertically arranged, synchronously driven face plates. This stabilises the long workpieces during welding. The clamping device can be manually adjusted to the width of the respective workpiece.
The 7-axis QIROX QRC-350-E welding robot is mounted overhead on a vertical lift. This enlarges the robot working space and simplifies welding of the large-volume and complex mast modules. Via a floor-mounted liner track, the welding robot can cover the large component lengths and flexibly switch between the two stations.

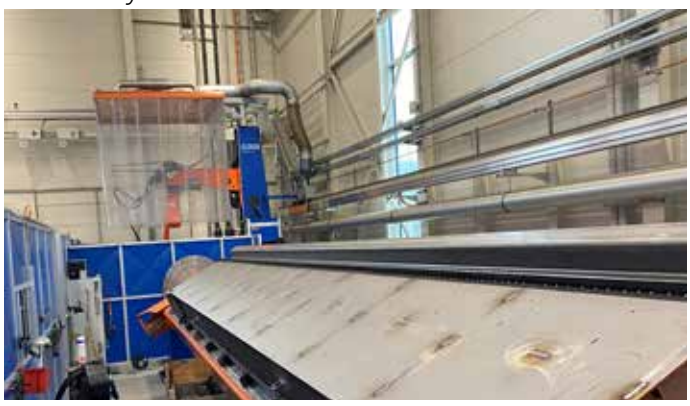

Photo 2: The new CLOOS robot system can weld workpieces up to a length of 11 metres.

The tool changing system enables the automatic change of several welding torches and the combination of different welding processes on one robot. The seams inside the components are welded with a 600 mm long single-wire special torch. A tandem welding torch takes over the welding of long, straight seams. Tandem Weld is characterised in particular by a high deposition rate for maximum welding speeds.

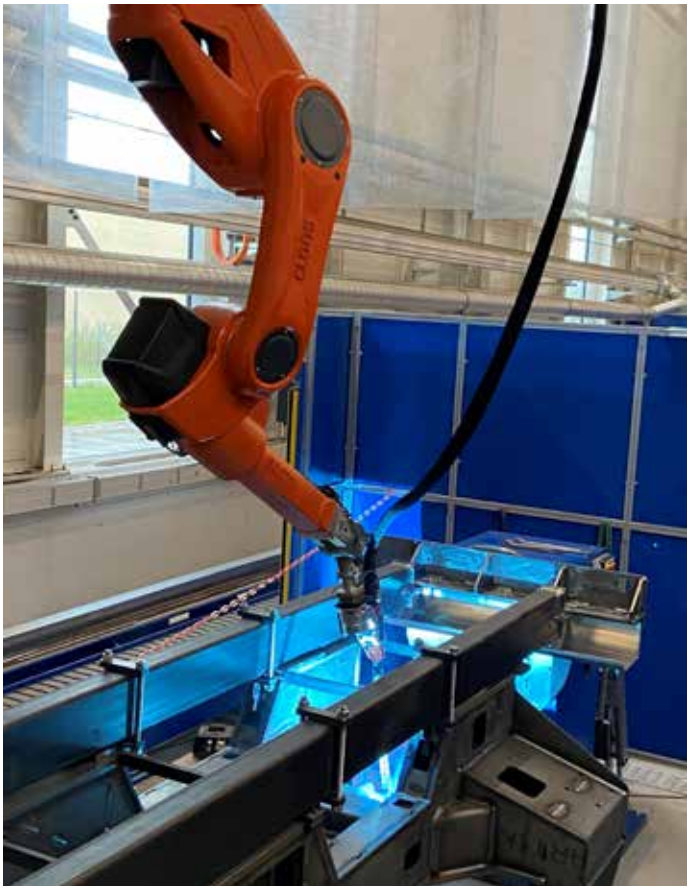

Photo 3: The 7-axis QIROX QRC-350-E welding robot is mounted overhead on a vertical lift.

Significant increase in efficiency

"The system is a real eye-catcher in our production," says Voser happily. By switching from manual welding to robot welding, Stöcklin has greatly accelerated the production processes. In addition, the non-productive times could be significantly reduced. "Due to the 2-station structure and the flexible application possibilities of the system, we have no downtime and use every minute perfectly," explains Gaisser. “Overall, we were able to significantly increase our production capacities.“”

The welding robot achieves exactly reproducible results so that the quality could be increased once again. The company can now act more independently of human resources. Because Stöcklin is also increasingly facing the difficult challenge of finding suitable manual welders due to the shortage of skilled workers.

"Our employees are enthusiastic about the new robot system," says Gaisser. “In order to make full use of the innovative welding technology, the employees were intensively trained by CLOOS.“ Since the robots do the physically heavy work, there is less general exposure to arc radiation and welding fumes. Welders can concentrate more on process monitoring.

Professional cooperation

In addition to the robot system, Stöcklin uses several welding power sources for manual welding in production. “Already in the initial phase of the project, we were confirmed that CLOOS is the right partner for us," emphasises Voser. “The colleagues at CLOOS directly dealt intensively with our task and designed a very complex layout for us right at the start.“ The good cooperation continued throughout the entire project. In addition, production manager Gaisser praises the good cooperation with the CLOOS sales agency Vaterlaus Schweisstechnik for the on-site service in Switzerland.

Photo 4: The Stöcklin logistics systems are used in various industries.

Press contact:
Carl Cloos Schweisstechnik GmbH
Carl-Cloos-Str. 1, 35708 Haiger, GERMANY
Stefanie Nüchtern-Baumhoff
Tel. +49 (0)2773 85-478
E-mail: stefanie.nuechtern@cloos.de