MACHINE TENDING CASE STUDY

Temar

Four UR10e Cobots Reduce Manufacturing Costs and Boost Quality at Temar

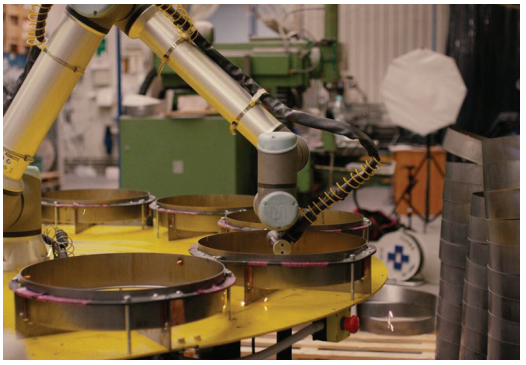
CHALLENGE

Temar, a Poland based manufacturer of lighting fixtures, wanted to increase their competitiveness by automating the workstations. In addition to being user-friendly, the automation solution had to be secure, precise, and functional. The robotic arm's reach was also crucial because it had to enable operations within a one-meter radius and include an accurate force sensor. Temar needed a system they could deploy without having to put up safety fences, therefore another important element was the ergonomics of man-machine collaboration.

Temar was considering using conventional industrial robots, but after speaking with their vendors, it became clear that such an implementation would be prohibitively expensive and complex.

SOLUTION

Temar's fabrication plant automation was based on the UR cobots supplied by the Polish partner ProCobot. The first UR10e arrived in December 2019 and was implemented at the welding station. In 2020, three more UR10e cobots were implemented at the Temar plant – at the paint shop, to operate with the press and with the laser device.



"Our employees quickly got used to collaborating with the cobots – the job of the operators is to turn the program on and off, and to supervise the machine. The team of engineers is happy with the new technology – we have done the implementation ourselves and are expanding more cobot operations onto more work stations," says Łukasz Okoń, Technical Director, Temar.

"The cobots from Universal Robots have met our requirements. We needed the full control over the implementation process and over automated work stations. The flexible approach of UR that enabled us to self-integrate was an advantage," says Arkadiusz Okoń, President, Temar.

The job of the UR10e operating is tending the press, loading and unloading steel discs. The robot is equipped with a gripper with suction cups connected to a vacuum pump – in this way the cobot moves the steel discs to the press and then palletizes them. In turn, the UR10e used in the paint shop was equipped with an electromagnet. Its job is to move the produced elements to the conveyor. The welding robot is using a standard pistol attachment to affix special plugs to the metal frames of the lamps. Welding patterns are programmed through the UR teach pendant. Cell including cobot and laser is still under preparation.

Temar's bet on its technology development has made the company a more competitive manufacturer and a more attractive employer – the most tedious and cumbersome tasks are now performed by the collaborative robots.