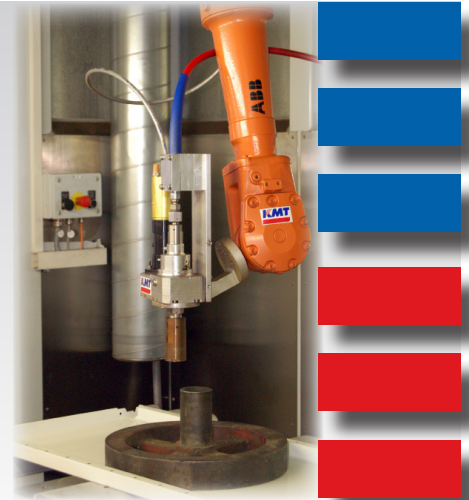


KMT Robotic Solutions Success Story:

KS-Aluminum Technologie AG

KMT cleaning system increases quality, saves time and improves working environment for German manufacturer



Challenge

KS-Aluminum Technologie AG, part of the automotive sector of the German Rheinmetal Group, manufactures aluminum engine blocks for customers like Audi, BMW, Porsche and the VW Group. The engine block casting molds, made from low-pressure aluminum, require cleaning every 1,000 -1,200 uses because of mold release and aluminum residue build-up. To clean each of the 15 different engine mold models, they must first be taken out of production and disassembled into their multiple pieces. Next, an employee wearing a protective suit must then take the parts into an enclosed area, sandblast each piece, rinse it with high-pressure water, reassemble the molds, then prepare the mold surface before entering it back into production. This time-consuming process was not only labor-intensive, but it was often inconsistent. This impacted casting quality and created an unpleasant working environment for employees.



Solution

KS-Aluminum contacted KMT Robotic Solutions, AB in Ronneby, Sweden, to evaluate and test a variety of system concepts. After being awarded the business, KMT Robotic Solutions provided KS-Aluminum with a single ABB IRB2400 robot mounted on a track inside an enclosed cell. The cell includes integrated shuttle tables that allow the system operator to load and unload mold parts on one side while the robot is cleaning another set of mold parts inside. The cell also includes a pallet system with dowel pins for accurate part placement and a non-contact coding system. The robot is equipped with KMT's standard Rotojet Cleaning Head – a pneumatically-driven rotating nozzle body with up to 4 waterjet orifices.

Results

The system enabled them to improve mold cleaning and resultant casting quality. It also saved time by enabling the company to double the amount of molds cleaned per day. The system removes the manual sandblasting process, thereby preserving the life of the molds and improving working conditions for employees.

www.kmtrobotic.com

KMT Robotic Solutions
Creating Value through Automation



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