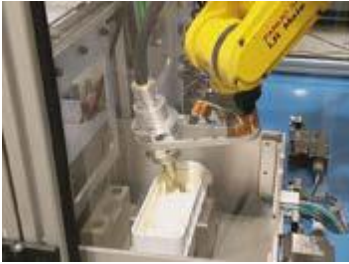


Solving Potting and Assembly Adhesion Challenges with Custom Solutions



Mertek Solutions, Inc. (Sanford, NC) designs and builds custom machinery for automated manufacturing in a wide variety of industries including automotive, medical, packaging, assembly, consumer goods, appliances and plastics. The company often integrates robotic automation with adhesive dispensing. In many cases, atmospheric plasma or flame surface treating technologies are used when adhesion needs to be improved for critical bonding requirements.

Jerry Pedley, President of Mertek, says, "It's important that we work with smart suppliers who are experts in their field." Mertek partners with leading robotic manufacturers and for surface treating chose Enercon Industries for their expertise in both flame and plasma surface treating.

Solving Adhesion Issues on Plastic Pool Filter

Mertek recently partnered with Enercon on a project involving a plastic pool filter. The bond between an epoxy potting adhesive was failing and allowing water to pass through. It was determined that an Enercon Blown-ion™ plasma treater would successfully treat the plastic surface to improve adhesion.

A Blown-ion™ plasma treater uses air and electricity to form a high voltage arc inside of a chamber. The system forces the positively charged ions out of the discharge head at high velocity toward the surface to be treated. These ions positively charge the object's surface, increasing its surface energy and making it more receptive to adhesives.

"We understand the basics of surface treating, but we rely on Enercon's expertise for specific application requirements."

Jerry Pedley, President of Mertek

Mertek designed a two-station cell in which a FANUC LR MATE 200iD robot uses the Enercon treater to increase the surface energy across the cracks and crevices that the Epoxy needs to fill. It then performs a quick tool changeover and utilizes a dispensing head to deposit the adhesive in the designated areas.

Appliance Assembly Adhesion Solved with Combined Expertise

Every custom integration project has its share of unique challenges. Mertek works across many different industries and this diverse experience helps the company develop winning solutions for their customers. When it comes to surface treating, Jerry Pedley says, "We understand the basics of surface treating, but we rely on Enercon's expertise for specific application requirements."

For example, another recent project involved adhesive component assembly of a consumer appliance. However, in this case plasma was not the best solution. Enercon's lab testing showed that a flame treating system would be the best technology for the application. Mertek's team successfully integrated a Flame Series surface treater for the application incorporating all the required operational and safety protocols.

As an ISO 9001:2008 certified company and winner of 20 Awards, Mertek has earned its reputation in the industry for creating innovative solutions and finding partner suppliers who share their passion for customer success. "Enercon is the type of partner we look for. They are not only experts in their field, they know the support a custom machinery builder needs to ensure equipment seamlessly and cost efficiently integrates into the final product," concludes Pedley.

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