

NEWS

Atmospheric Plasma Technology

Clean Etch Functionalize Prep Treat

Custom Wire Tech partners with K-Kolor for mission critical printing on custom Medical Devices

Custom Wire Technologies of Port Washington, Wisconsin offers contract manufacturing of custom wire products with capabilities for wire diameter sizes as small as .001". Their products are used in the medical field and require mission critical performance.

As an ISO 9001 certified operation the company continually searches for ways to improve the quality of their products. In some cases this leads them to take greater control of value adding operations.

The Custom Wire Technologies facility features custom pieces of integrated manufacturing equipment specifically optimized for the production of custom wire products with excruciatingly tight tolerance specifications.

In-house printing

Until recently the company outsourced printing on their manufactured products. Seeing an opportunity to expedite manufacturing times by taking control of print operations President Bob Boldig developed a partnership with Wisconsin based K-Kolor.

K-Kolor provides expertise with ink jet and pad printing on a wide variety of materials. When they found ink would not bond to a product made from LLDPE they consulted with their pad printing manufacturer which recommended a Marabu ink along with an Enercon surface treater.

K-Kolor President Ron Kohl says, "Enercon provided several rounds of complimentary lab testing to help us qualify the process." The trials proved that the Dyne-A-Mite™ HP air plasma surface treater makes the printing indelible. Kohl adds, "For medical printing applications it's imperative to follow the defined protocols. Enercon's experience with medical device applications ensured the project went very smoothly."

To automate the treatment process Boldig's team designed an integrated robotic feeding system that precisely positions and rotates the wire products in the treatment zone. Printing is achieved with the pad printer which utilizes a rotary fixture for rotational printing. Since partnering with K-Kolor, Custom Wire Technologies increased its printing throughput and reduced the number of pieces rejected due to printing imperfections.

Other applications

The power of surface treating has made an impression on Boldig. "I'm really impressed with the improvement in adhesion these compact systems provide. In fact, we tested the system for a few other applications in our facility."

One of the other adhesion improving applications involved an experimental fixture the company was developing with a bottle and industrial grade velcro. "We used cleaning solvents on



Medical devices precisely rotate and traverse under the treatment head for optimal results.



The Dyne-A-Mite™ HP air plasma system prepares medical devices for printing.

the bottle and we still could not get the industrial grade velcro to hold the bottle in place." Boldig decided to pass the bottle through the treatment zone of the Dyne-A-Mite™ HP treater to see if adhesion would improve. The results were impressive.

"The bond created between the adhesive on the velcro backing and the bottle was so strong that it held up while the bond between the velcro and the backing itself failed. As a manufacturer a surface treater is a great tool to have in your facility," says Boldig.

New Plasma3™ VCP provides variable chemistry atmospheric plasma for difficult to bond to surfaces



When air plasma systems fail to meet your adhesion requirements its time to try Enercon's new Plasma3™ VCP system. It's ideal for difficult to treat surfaces such as PTFE and features Enercon's patented plasma delivery technology.

Powerful yet gentle in-line atmospheric treatment is optimized to clean, etch and functionalize a wide range of materials that would otherwise be unresponsive. This eliminates expensive priming, batching

and hazardous chemical surface preparation processes.

Key to its success is the uniform and dense plasma it generates which provides an aggressive and consistent treatment. What makes this system truly unique is its versatility.

VCP is an acronym for Variable Chemistry Plasma. The system may be configured with unique chemistry blends to optimize the effects of treatment for different materials.

In addition to being effective treatment results are also long lasting making it compatible with operations that require a build-up of inventory.

The system is specifically designed for treating sheets, boards and objects with minimal contour such as tubing and wire.

Schedule a free laboratory trial to see the power of Plasma3™ VCP. Contact us at info@enerconind.com.

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ABS, ASA, EPD, EVA, FP, HDPE, LDPE, PC, PE, PET, PMMA, PP, PS, PU, PVC, PBT, TPU, TPO, FEP, PTFE, PFA, metals and much more.



Plasma3™ VCP treats wires (above) and flat object such as sheets and boards (below).

e Tools of the Trade



Non-toxic dyne pens measure surface energy

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