Femtosecond Laser Machining of Nitinol for Medical Devices

Dr. Andrew Pequegnat & Michael Byrne explore advancements in state-of-the-art, Nitinol-based manufacturing technologies.

BETHEL, Conn. (PRWEB) October 18, 2018 -- Memry Corporation, a vertically integrated world leader in medical applications requiring Nitinol alloys and complex manufacturing processes, announced today it’s advancements in state-of-the-art manufacturing technologies utilizing femtosecond laser machining of Nitinol for medical devices.

On Oct 25th and Nov 8th, Dr. Andrew Pequegnat will host a live webinar as he explores state-of-the-art femtosecond laser machining processes with a specific focus on Nitinol medical devices. To register, please visit https://www.memry.com.

Nitinol’s unique super-elastic properties have made it an essential material in the medical device engineer’s toolbox. Nitinol has become a staple in the cardiovascular, neurovascular, endovascular, peripheral vascular, orthopedic, spinal, urology and dental arenas with applications ranging from neurovascular stents and heart valve frames to orthopedic anchors and orthodontic archwires.

Over the last two decades countless advancements in medical device technologies have been made possible not only due to the application of Nitinol but also advancements in the state-of-the-art manufacturing technologies required to produce such devices. Laser manufacturing technologies have been at the forefront of these innovations. The non-contact, precision and low thermal input characteristics of laser processes have made lasers the technology of choice for welding, cutting/ablation and marking.

More specifically, the extreme thermal-sensitivity of Nitinol’s microstructure and thermomechanical performance makes low heat input secondary processes a necessity. In this paper, state-of-the-art femtosecond laser machining processes will be presented with a specific focus on manufacturing Nitinol medical devices.

About Memry Corporation:

Memry is a vertically integrated world leader in medical applications requiring Nitinol alloys and complex manufacturing processes. Our production capabilities consist of a wide variety of fabrication, finishing, testing and quality processes, which together deliver the highest quality Nitinol components. Laser cutting, shape setting, laser welding, wire EDM, electropolishing and surface treatments are just a few of our core capabilities. Our engineers bring decades of Nitinol experience to every project, providing valuable insight on how the material reacts in real-world conditions. These initial discussions will translate into time savings and cost effectiveness for your component project. Let the Memry experts assist you in selecting the right path to your precision component, manufactured from raw Nitinol wire, tube, strip or sheet.
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