



TERRONICS
DEVELOPMENT
CORPORATION

Press Release

May, 2012

Stent Coating: Advantages of Electrohydrodynamic Atomization over Ultrasonic Atomization

Drug coated stents have proven effective in combating the gradual build-up of growth in the stent known as restenosis. This growth can re-block the artery possibly causing a worse condition than the first. Many methods of applying coating to the stent have proven less than fully effective or even reliable.

Terronics Development's electrostatic technology for coating stents has material transfer efficiencies over 80% and in some cases as high as 95%. By comparison ultrasonic technology, for example, is perhaps at best a quarter of that, requiring a vacuum system to capture the overspray as demonstrated on a competitor's video. ([Click here for video](#)) Dealing with this waste is expensive; never mind using 4 times as much expensive drug to coat the stent.

Equally important to our high targeting efficiency is the ability to real-time observe the process result through an electrometer. This instrument is used to read and record the actual electrical current that is transferred as the droplets land on the stent (without any likelihood of them bouncing off as they do in other methods, incidentally.)

Typical of modern instrumentation, the entire coating process can be reviewed, statistically analyzed and saved as an electronic file, enabling product quality records to be readily maintained and accessed for decades. And, very significantly, these records enable the stent manufacturer to not bear the loss of product and productivity that occurs when a random sample of the stent batch is destroyed for quality control tests.

Terronics has been working on stent coatings with various manufacturers for over a decade, and has made very significant improvements in their technology that are the subject of several patent filings. For example, the Terronics' Turret Coater (US Patent 7,836,570 B2) makes it possible to readily load, coat and unload multiple products such as stents. Use of the Terronics Ceramic Single point nozzle with the Turret Coater enables very low material losses between the individual stents' coating application, minimizing waste and speeding production.

The addition to our product line of a Terronics four-axis servo driven lathe machine has added further capability to the electrostatic coating technology enabling accurate and repeatable coating of any shaped medical implant, such as a hip joint. Lacking the position accuracy, targeting efficiency, and the use of the electrometer, these accuracies and repeatability are simply not possible with other coating methods.

Terronics welcomes inquiries on this exciting work and is pleased to serve all its customers with state of the art equipment and a truly excellent staff of experienced and capable people.

Terronics Development Corporation
7565 West 900 North, Elwood, Indiana 46036
Ph: 765-552-0808 Fx: 765-552-0810
www.terronics.com