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Logistics-friendly, Low Plasticity Burnishing (LPB) supported by FDA data as a guardian of metal components.

On-site, surface enhancement process eliminates fatigue failures according to device experience database.

Cincinnati, Ohio – July 25, 2008, – Recent U.S Food and Drug Administration (FDA) data, comprised of reported "adverse events" to orthopedic implants, reveals that Low Plasticity Burnishing (LPB) eliminates the occurrence of fretting fatigue failures in modular hip implants. LPB treatment is a surface enhancement process that can be performed at the product manufacturer's site using existing CNC machines with 100% continuous, quality control monitoring.

Originated and developed by Cincinnati's Lambda Technologies, LPB is a proven surface treatment that develops a deep layer of high magnitude compressive residual stress (RS) to improve fatigue strength and damage tolerance as well as mitigate stress corrosion cracking (SCC) in critical metallic components.

Recently, "adverse event" data was collected from the FDA's Manufacturer and User Facility Device Experience Database (MAUDE), which gathers reports of problems involving medical devices, such as fractures and complete breaks. The data extracted from MAUDE indicated the company which adopted LPB into its manufacturing process in December of 2004, experienced zero failures in their utilized components.

While eliminating failures is a result of the many technical strengths of LPB, there are numerous logistical and quality control advantages of the surface enhancement process that reduce costs and increase profits for manufacturers.

LPB users logistically benefit from on-site processing by minimizing spare requirements, eliminating shipping costs and time, and reducing handling damage and loss. LPB processing is precise and reproducible using existing conventional CNC machine tools thereby reducing a manufacturer's initial capital investment.

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Quality control advantages include 100% continuous, real-time process monitoring; automatic immediate acceptance testing; individual processing quality data files captured by component serial number; continuous Statistical Process Control (SPC) calculations integrated into the client's Quality Assurance (QA) system; and immediate notice of deviations sent by e-mail to QA personnel.

Lambda Technologies continues to embrace lean manufacturing processes; time related positioning of resources; and other initiatives that enhance manufacturing practices and eliminate defects while reducing costs and improving quality for its clients.

To learn how to implement on-site, Lambda Technologies patented surface enhancement processes into your business, contact our Client Support Department at (513) 561-0883 or to download the LPB Application Note related to this article or any of Lambda's LPB Application Notes, please visit www.lambdatechs.com.

Lambda Technologies is an innovative company incorporating a premier materials research laboratory with a world-class engineering and production enterprise dedicated to the development and optimization of surface treatments to improve component performance.

Lambda Technologies. Improving Component Life and Performance.

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