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PMPA
Precision Machined Products Association

Precision Machining Industry Transforms To Serve Population Dynamics

By Miles Free, Director, Technology Services mfree@pmpa.org

Demand for medical implants in the United States is expected to grow by 11 percent annually through 2007. The market for knee and hip replacements alone in Europe is expected to grow from 1.4 billion U.S. dollars to more than 1.83 billion in 2010. At the heart of each of these procedures is a manufactured, precision-engineered implantable component, the ultimate application of machining technology to improving human quality of life.

The fastest-growing age group in the United States is adults 65 and older, which is projected to grow from 35 million to more than 85 million by 2050. The second fastest-growing segment is adults 45 to 64 who were born during the early years of the baby boom from 1946 to 1950. (This is fueled by a 55 percent increase in the 50 to 54 age range.)*

This aging of society—and the expectations of a highly active lifestyle and high quality of life—are driving the demand for medical implants made by precision machining methods.

The precision machining industry continues to manufacture safety-critical components for automotive antilock brake and air bag safety systems, as well as parts for aerospace, appliance and electronic applications. However, it is this demographic trend toward an older, more active population that has moved the industry into implantable medical parts—the ultimate in personal jewelry.

PMPA member shops machine products for every sector of the market and economy, but the medical sector has shown the brightest growth and opportunity in recent years. Currently, about one-third of PMPA members produce parts used in the medical field. Companies that manufacture precision machined, implantable medical parts both contribute to and receive benefits from their membership in the association.

These members can devote more of their professional and management time working on their medical products and perfecting their manufacturing processes because the PMPA is able to provide services in the areas of benchmarking, education, technology and networking at both a local and national level.

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An example of these services is machining information. Many medical implants are made from materials not traditionally seen in chip-making shops. Participants posting questions in PMPA Listserve forums, as well as during meetings and roundtable discussions with other shops, benefit from sharing information on "what works" with difficult-to-cut materials, while respecting each other's proprietary interests. For each company to succeed, the industry has to be competitive and sustainable. The PMPA provides the means and method for achieving these goals.

A new shop might be making state-of-the-art medical implants with new machinery, but will still be subject to the legacy of rules, regulations and human resource issues that face all manufacturers today. By belonging to the PMPA, even the newest medical implant startup company can take advantage of online OSHA 300 reporting and benchmarking of key business indicators. That company will also find a ready source of advice on human resources, safety, environmental issues, quality and other topics of manufacturing relevance.

The success of your medical implant manufacturing operation will be determined by a host of factors—your product, your process and the execution of your manufacturing system. Belonging to the PMPA will give you more time to focus on your product and process by giving you improved information and assistance for the execution of your manufacturing system.

*All population projections are from the U. S. Census Bureau 2001, 2004.

Critical Skills For Effectiveness In Today's New World — Part 2 Of 4

By Miles Free, Director, Technology Services mfree@pmpa.org

The four trends that define the differences between yesterday's and today's way of maximizing effectiveness include the following: 1) Solo to team performance; 2) Stand-alone company to link in supply chain; 3) From problem detection to process failure prevention; and 4) From managing data to empowering decision making. This month's article looks at the second of these trends.

Stand-Alone Company To Link In The Supply Chain.

Your company's ability to perform is, of course, critical. However, today, performance alone cannot ensure your company's profitability nor sustainability. The health of the various supply chains, of which your company is a part, is more likely the best predictor of long-term sustainability and success.

I often hear that it is more important to work on your strengths, rather than spend a lot of time on your weaknesses. But, in a world where

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