Heraeus Medical Components Division

Puerto Rico Manufacturing Extension Inc

Heraeus Medical Components Caribe Inc Identifies Process Improvement Opportunities with VSM

Client Profile:
Heraeus Medical Components Caribe Inc. provides expert, comprehensive medical component manufacturing services, meeting a broad range of functional demands. The plant was previously operating as a subsidiary of Synovis Life Technologies, Inc.until acquired by Heraeus in 2008. Heraeus Caribe manufactures complex components and assemblies for medical device companies for use in active implants and in the interventional and surgical treatment of disease. It produces and distributes a wide range of metal-based components such as electrodes, coils, titanium cases, and other micro precision parts for stimulation devices like cardiac pacemakers and internal cardiac defibrillator. Their main customers are cardiac pacemaker manufacturers located in Puerto Rico, the United States and Switzerland. Heraeus Caribe currently employs 45 people at its facility in Dorado, Puerto Rico.

Situation:
Heraeus Caribe had been under pressure from its customers to reduce cost in order to remain competitive in the market. Additionally, the plant was greatly compelled to enhance its competitiveness as compared to the other four sister plants which make similar products. Under current business conditions the parent company is always willing to transfer current and new product to the most cost effective plants. In order to identify process improvement opportunities, Heraeus Caribe management called upon the Puerto Rico Manufacturing Extension Inc. (PRiMEX), a NIST MEP network affiliate, to conduct a Value Stream Mapping (VSM) exercise of the 'stylets' line, metal wire products that account for around 80 percent of the plant's production volume.

Solution:
PRiMEX consultants provided training in the VSM process for a team of six employees from various operational departments. After the initial training, the team started to gather the information to construct the current state map. When completed, the current map showed an overall lead time of 140 days and a process time of 4958 second or 1.38 hours. The future (proposed) map was developed by the team through the analysis of the current map and recommending Kaizen events to combine operations in cell-type configurations in order to improve product flow and reduce in-process inventory. There were four major improvement recommendations which required eleven Kaizen events to complete their implementation. The future map showed a projected overall lead time of approximately 51 days and a process time of 1.15 days. The overall lead time projected reduction is 69 percent, while the process time projected reduction is 16 percent. A Gantt chart was prepared for the VSM project implementation plan where the different improvement actions were listed indicating starting time, estimated duration, and the responsible team members for each Kaizen.

Results:
Projected:
* Improved lead time by 69 percent.
* Improved process time by 16 percent.
* Improved Work in Process by approximately 500,000 pieces.

Testimonial:
"The Value Stream Mapping exercise has given us the tool to determine and prioritize our improvement opportunities in order to better serve our customers while reducing our costs and maintaining our competitiveness."

Marcos Cardenas, Senior Manufacturing Engineer