Lin Engineering uses cloud-based quality control to monitor overseas facility

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Abdallah Samaha, Custom Product Manager
Lin Engineering

Lin Engineering is a U.S. manufacturer of hybrid step motors that focuses on leading technology designs, high-quality products, and customer service excellence. Founded in 1987, Lin Engineering began as a consulting company specializing in step motor applications. Today, it is the largest manufacturer of the best 0.9-degree step motor in the motion control industry.

Headquartered in Morgan Hill, California, with a second location in Nanjing, China, Lin Engineering offers a breadth of products consisting of stepper motors, integrated stepper motors, stepper motor drivers and controllers, brushless DC motors, encoders, gearheads, and lead screws. The manufacturer serves a broad range of markets including aerospace and defense, automation and packaging, medical, printing and engraving, security and surveillance systems, semiconductors, and solar and green technology.
Lin Engineering
Case Study

The challenge

With a quality policy incorporating continuous improvement and the 4.5 Sigma Way, Lin Engineering has long established itself as a manufacturer of high-quality products. As it expanded on its 4.5 Sigma initiatives, Lin Engineering realized that it would need a Statistical Process Control (SPC) system that would allow for real-time quality monitoring and process control.

The company's overseas operations created an additional challenge; Lin Engineering needed to ensure that products produced in its facility in China were without defects. If a product failed inspection after it was received in the U.S., it was costly to ship it back to China.

Plus, Lin Engineering wanted quality analytics to verify that each product meets a stringent quality standard to strengthen the company's leading market position and drive new revenue.

The solution

In its search for an SPC provider, Lin Engineering concluded that InfinityQS, the global authority on real-time Manufacturing Intelligence and enterprise quality, was the best fit. InfinityQS ProFicientTM, a Manufacturing Intelligence hub powered by a centralized SPC analysis engine, offered Lin Engineering a complete package that included both basic and advanced analytical tools and tracking mechanisms.

In order to integrate information from its overseas facility, Lin Engineering adopted ProFicient's cloud-based deployment, ProFicient On Demand. With ProFicient On Demand, Lin Engineering can monitor quality at its China location in real time and access information anywhere, whenever it is needed.

For example, when an out-of-spec issue occurs in its China facility, Lin Engineering instantly receives an automated email alert, allowing operators to take immediate corrective action – long before the product is shipped.

The results

Because of its ability to measure subcomponents and monitor both internal and supplier quality with ProFicient On Demand, Lin Engineering has seen a reduction in defects on finished goods as well as reduction in the inspection requirement.

Control charts provide the company with additional insight. Using a parameter essential to motor performance in its control charts, Lin Engineering's C-suite is able to look at trends around this parameter and easily gauge whether manufacturing processes are functioning at an optimal level.

Abdallah Samaha, Custom Product Manager, said, “I am happy with the ProFicient On Demand product and the InfinityQS team that is behind it. InfinityQS’s technical support and training team are excellent. They are always able to provide answers to our questions and resolve issues as they come along.”

While Lin Engineering is already using some the control chart functions of ProFicient On Demand, it is also contemplating expanding to other modules such as assignable cause and corrective action and inspection.

Samaha added, “We are looking to improve our confidence in our capabilities and numbers, which will guarantee a quality product to our customers. Such confidence is important to our future – it allows us to meet our customer requirements as promised. I believe ProFicient On Demand is a tool that will get us there, essentially by helping us to communicate better with our suppliers using data to drive such communications.”