ESCO Turbine Technologies Sharpens Customer Service

ESCO Turbine Technologies (TT) makes high specification components for turbine engines used in both aerospace and industrial gas turbine applications. Like their counterparts on the ESCO Engineered Products side of the business, the Turbine Technologies team has devoted a great deal of time and energy on process control, optimizing customer service and providing the utmost in economic value from the parts it manufactures.

When an order comes in, a thorough contract review is undertaken by the engineering, product quality and manufacturing teams. Key characteristics of the project are identified and internal methods sheets are generated. Work instructions are written to control each step in the process and assure consistency in manufacturing.

For example, specific temperature ranges for pre-heating are set and optimum pouring temperatures are determined to assure defect-free metallurgy. Non-destructive testing is scheduled at multiple stages to catch and correct flaws early.

"There are times when we go through a customer's blueprint and we might see where tolerances might be adjusted slightly—with their approval—for better manufacturability without compromising the integrity or quality of the part," noted John Bulson, coordinator of Quality Systems, QVS, and Export Compliance for TT Syracuse. "Process control is key. The customer benefits when we have the processes in place to produce their parts efficiently, consistently, and with little or no rework or scrap."

Quality-Value-Speed (QVS) training over the last few years has reaped benefits in terms of reduced cycle times and less rework. When controls are in place and problems are detected and fixed early in the process, parts move more quickly through the plants, there is less work-in-process, and scrap rates plummet.

Wax patterns are carefully checked for quality before advancing to the mold dipping process.

Using Training Within Industry (TWI) techniques, ESCO Turbine Technologies has minimized the variability that can occur between operators and shifts. They have identified and implemented best practices in each operation. "We're much more consistent than we were six or seven years ago," John noted. "The improvement has required training, commitment and a cultural shift on the part of our manufacturing people. We've also made technological improvements, like CMMs and robotic mold dipping, which have contributed to greater consistency."

ESCO's no-nonsense commitment to consistent quality, value and speed is setting Turbine Technologies apart from the competition. Currently, TT is working hard to provide all customers with 100 percent on-time delivery and zero defects – a lofty goal, but one that it is achieving for a number of key customers. ★