American Science & Engineering Keeps Lean
With Sequence Enterprise Software

In 2008, American Science and Engineering (AS&E) initiated a lean manufacturing initiative that included streamlining its manufacturing documentation process.

Each step of manufacturing -- including keeping a production record book, test procedures, quality inspections and visual work instructions -- was done manually in a paper-based system. The manufacturer of sophisticated X-ray products used to inspect parcels, baggage, vehicles, pallets, cargo containers and people allocated 1.5 personnel headcounts over an eight-hour shift for the documentation process.

"There was tremendous waste of time and paper," says Doug Capri, AS&E's manufacturing engineering manager. "We had to manually maintain, audit and laminate each document on a daily basis before we started a build. We had to use Word and an editing software package for the digital pictures. So, we would normally take a picture, crop it, and then paste into Word. That was very cumbersome."

AS&E chose Sequence Enterprise Software from FFD, Inc., a Knoxville, Tenn.-based software company to capture of AS&E's core manufacturing knowledge and eliminate the need for an inefficient text editor and a third party graphics packages.

"Sequence is an extremely efficient tool for knowledge capture, organization and management." says FFD President Barry Lucas. "Sequence has all of the necessary editing tools for text and graphics to eliminate multiple software packages. Additionally, authors of instructions aren't creating and formatting a document. They simply organize information on a visual process flow tree. Sequence takes care of the deployment."

"We were skeptical that the software would do everything we needed," Capri says. "So, we rolled it out as a pilot project on one product line and then on our more simple and stable products. It went better than expected. Now we use it throughout our plant on all three product lines." The paperless deployment capability of Sequence allows AS&E to selectively access information in a controlled and validated manner and present it to personnel on

the shop floor. Every work order that is released from Oracle, the company's ERP system represents a serial number. When a work order is released, Sequence ties a specific set of instructions to that work order. The work instructions are accessed on the plant floor by work order number and become the core of their production record book for the customer. In fact, the product will not ship without a report from the Sequence software.

Today, the 1.5 person headcount once needed to maintain the different work documents have been redeployed elsewhere supporting the plant's lean initiatives. Capri says that the newfound benefits and efficiencies of switching to a paperless system were immediate, adding that AS&E recouped its investment in the software within the first year.

"Sequence is part of the overall process that has helped reduce cycle times by two weeks," Capri says. "Our customers want the products right away and if we can't deliver, they will go to somebody else."

Sequence Enterprise

Designed for the manufacturing enterprise needing work instructions that are collaboratively authored, fully integrated with ERP/PLM/MES and deployed in a real time, interactive paperless environment.

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