

Tecnomatix

Curtiss-Wright

A continuously improving production process

Industry

Electronics and semiconductor

Business challenges

Cycle time reduction of 50 percent over two years to maintain industry leadership

Keys to success

Integrated design, manufacturing, quality and ERP applications that provide an enterprise foundation for manufacturing execution
Continuous process improvement through innovation

Results

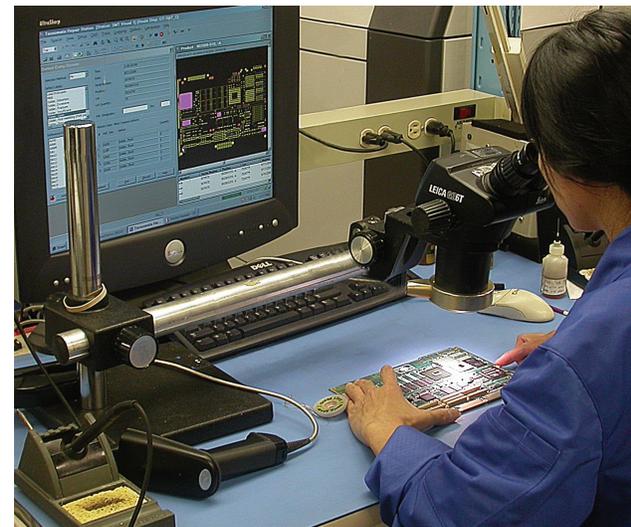
25 percent cycle time reduction achieved in first year
Shop floor is 99 percent paperless
40 percent of nonvalue-added activities have been eliminated

Standard software + innovation = true manufacturing integration

The Wright Brothers legacy

Curtiss-Wright Corporation is a diversified company that designs, manufactures and overhauls products for motion control and flow control applications. It also provides a variety of metal treatment services. The company employs approximately 6,000 people worldwide. Curtiss-Wright Controls Embedded Computing operates across six geographically dispersed sites, designing and manufacturing rugged circuit card assemblies for the military commercial off-the-shelf (COTS) market. The clear leader in this arena, Curtiss-Wright offers the industry's broadest product set including graphic cards, I/O cards, digital signal processors used on air, ground and military platforms.

Curtiss-Wright understands that remaining the market leader requires ongoing effort. The company's Continuous Improvement program addresses this challenge by constantly seeking new ways to hold down costs and reduce cycle times. Management recently set an ambitious target of achieving a 50 percent cycle time reduction over the course of two years. As part of that effort, Embedded Computing is doing everything it can to streamline its production process. "We are eliminating work that doesn't add value, speeding up the nonvalue-added work we can't eliminate and doing the value-added work as smartly and as accurately as we can so there is no



rework," explains Gerry Bellehumeur, director of quality for Curtiss-Wright Controls Embedding Computing.

Innovation using standard software

Embedded Computing has taken standard design, quality and ERP software and created a true manufacturing execution system that eliminates many nonvalue-added activities. The three main manufacturing applications (Expedition from Mentor Graphics; Tecnomatix® MES for Electronics software from Siemens; and the SAP enterprise resource planning system) are seamlessly integrated to minimize data duplication. For example, design information for a new circuit card created in Expedition is sent to SAP, which creates a bill of material without any data re-entry.

Solutions/Services

Tecnomatix
www.siemens.com/tecnomatix

Customer's primary business

Curtiss-Wright Corporation is a diversified company that designs, manufactures and overhauls products for motion control and flow control applications, and provides a variety of metal treatment services.
www.curtisswright.com

Customer location

Roseland, New Jersey
United States

"Siemens Tecnomatix software ties it all together."

Gerry Bellehumeur
Director of Quality
Curtiss-Wright Controls
Embedded Computing

Tecnomatix MES for Electronics software "ties it all together," according to Bellehumeur. This software issues and tracks work orders but also goes the extra step of including the information needed for manufacturing (design files, drawings and bills of material), which it accesses from the other applications. Tecnomatix delivers this information electronically to manufacturing engineers and shop floor personnel, eliminating the labor that used to be required to obtain and distribute these documents. This approach also saves paper. Since the group started using Tecnomatix, the shop floor has become 99 percent paperless. More importantly, production always gets accurate and up-to-date information, preventing costly mistakes and rework.

A full circle of information re-use

The Siemens Tecnomatix solution tracks a circuit card through the production process, monitoring work in progress and collecting quality data along the way. "This gives us a very fast, streamlined way of capturing quality and analyzing quality data without burdening the production floor," says Bellehumeur. Quality data from Tecnomatix flows back to SAP for cost management evaluations. "As a card goes through production, we're adding value to

that card in terms of labor value," says Bellehumeur. "By having Tecnomatix update SAP, we're doing that cost capture accurately and without having to re-enter data into SAP." This system also supports the group's compliance efforts. "It ensures that we have proper tracking of material, that we use that latest drawings and ensure that we proactively eliminate defects," Bellehumeur adds.

Bellehumeur estimates that Embedded Computing has eliminated approximately 40 percent of the nonvalue-added activities on the production floor since implementing this manufacturing execution system. These efforts have contributed to a 25 percent reduction in cycle time in a year, putting the company on track to reach its 50 percent target. In summarizing the level of integration this group has achieved (a level not seen in most companies), Bellehumeur says, "Innovation has been part of this company's culture for many years, well before we bought these applications. By using standard software in an innovative way, we have created an integrated, lean manufacturing process that should ensure our future as the market leader."

Siemens Industry Software

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