

CASE STUDY

Lean Manufacturing

At United Electric Controls in Watertown, Mass., Lean Manufacturing is the centerpiece of a business plan that has significantly transformed this small but growing manufacturer of pressure, temperature switches and temperature-sensing probes.

UE designs and manufactures a very broad line of products with countless options. Management realized several years ago that it needed to overhaul UE's manufacturing system to stay competitive. Company President Dave Reis decided to take the Lean Manufacturing path. Instead of expanding the existing facilities, he shrank them by two-thirds, reduced employment by more than 50 percent through attrition and voluntary retirement, and cut the number of suppliers in half. Along the way, quality greatly improved, delivery lead times dropped from 10 to 20 weeks to less than a week and often only an hour. UE was able to completely eliminate a large inventory stockroom that was previously thought indispensable. Sales and profits went up.

"Lean manufacturing isn't at all about huge investments in expensive capital equipment. It is all about making deep cultural shifts within the company, overcoming resistance and changing the way people think about their work," Reis says. "We borrowed a lot of brilliant yet simple ideas that were developed many decades ago by Shigeo Shingo and Taiichi Ohno, the creator of Toyota's Just-In-Time production system. People, not expensive equipment, are the greatest asset any company has. Lean Manufacturing's magic lies in its simplicity. Its essence is in learning how to see the invisible waste within an operation and then to get rid of it. If you can't see it, then it will remain a part of the manufacturing process silently working against you every day. Many companies have no idea what the price tag is for all the waste. It is a very big number."

JIT works today where it could never have in the past. Improved communication technologies that can be synchronized with vendors and customers up and down the supply chain are largely responsible. Wireless phones, online order tracking, e-mail and company Intranets keep everyone informed about each stage of the process.

The Switch to Internet Operations and E-Business

SMMs are slowly increasing their use of the Web and e-business to increase efficiency and grow. They certainly got an early jump on the