

## KOSO AMERICA INC.

[www.rexa.com](http://www.rexa.com) / Proj. 2014 sales: \$55 million / Employees: 150 / Sam Lalos, president and CEO:

"We're looking forward to about another year of training and continuing to improve our processes."

NORTHEAST



A REXA CONTROL ENCLOSURE IS WIRED UP FOR A FACTORY TEST.

# OIL UP

## KOSO'S SPECIALTY VALVES AND ACTUATORS ARE HANDLING MORE COMPLICATED APPLICATIONS. BY RUSS GAGER

A modular approach to the assembly of valves and actuators for industrial uses enables Koso America to shorten lead times. Additionally, improvements in training and lean manufacturing methods have enabled the company to double its throughput in the same space.

"We supply equipment to the process controls industries," President and CEO Sam Lalos explains. "The four core vertical industries we serve are the power industry, the oil and gas industry, the mining or metals industries combined, and also the water and wastewater industries. Most of those applications are actuators mounted on control valves."

Lalos lists highly repeatable, precise control and the ability for continuous

duty as being key competitive advantages of the company's electrohydraulic actuators. Also, Rexa's design includes a mechanical fail-safe option, which is required by most customers in the event of power failure.

"Two other really important aspects of the competitive advantage include the amount of thrust and power that we can deliver and the difference in the weight of the device that drives the valve or the damper," Director of Business Development Wallace Lueders points out. "We have an extremely high level of force that can be delivered when it's required, much more so than other technologies."

That force can be delivered without the large pump and motor assemblies that run constantly in

central hydraulic systems. "Our electrohydraulic actuator is a totally sealed system," Lueders notes.

### MANUFACTURING IMPROVEMENTS

Over the past two years, four additional CNC machines were added to the 15 already in Koso America's 50,000-square-foot plant in West Bridgewater, Mass. Lean manufacturing techniques have been implemented during the last six years with a \$50,000 Workforce Training Fund grant in 2008 from the state of Massachusetts. Koso America had to match the cost with employee time and training material expenses. Workforce Training Fund grants are provided by the Commonwealth of Massachusetts, Executive Office of Labor and Workforce Development.

"At the time we started, we thought we needed more room, but within short order using the lean tools, we improved greatly in that area," recalls Steve Oliver, operations director.

Oliver estimates that during the past two years, productivity has improved 80 percent with a minimal increase in direct employees. "Our throughput through this facility has doubled over the last two-year period," Oliver declares. "Much of that is a result of lean manufacturing principles. We've addressed some of the bottlenecks both physically and from a process perspective. We better identified where the bottlenecks are and applied our employee teams to seek out solutions. It's really paid dividends here for us."

### MORE TRAINING

Approximately six months ago, Koso America was awarded \$62,000 for manufacturing processes and operations and \$7,500 for updating the company's website. "We're looking forward to about another year of training and continuing to improve our processes," Lalos says.

To design and deliver the training program, Koso America selected non-

profit MassMEP (Manufacturing Extension Partnership). “We’re working with them locally to craft and deliver the latest round of training for continuous improvement,” Lueders explains.

Another advantage that aids efficiency is the modular design of the company’s base product. “There is a wide variety of configurations that we can produce,” Oliver says, “but the base modular design allows us to leverage our high-volume material throughout our supply chain using both internal and external kanban.”

The products’ modularity can cut lead-times substantially. “Depending on the circumstances, our standard product lead-time is six to eight weeks,” Oliver estimates. “As the complexity of the product grows, you’re looking at eight to 12 weeks.”

The company’s globe valve line incorporates common body and bonnet castings with interchangeable trim sets to maximize part commonality, resulting in reduced lead-times. Mark Gallagher, president of the valve group, says, “The valve division leverages its domestic manufacturing capabilities and strong sub-supplier network to provide standard and custom products faster than many larger companies that rely on low-cost overseas manufacturing.”

The lead-time for a finished system still requires customer input. “Even though we have standard modules that can be combined into a system, the system can’t be built until we have all the customer requirements,” Lueders emphasizes.

Approximately 60 percent of Koso America’s products are distributed throughout North America and the rest internationally. “The oil and gas sector probably represents 75 to 80 percent of the growth of the company over the last two years,” Lalos calculates.

The company also has been providing its products for use in high-pressure acid leaching processes for gold and nickel extraction. “These are processes that are very demanding, where our product provides an effective solution,” Lalos notes. Offshore oil and gas production is another market that Koso America is exploring for future growth.

Lalos attributes the company’s success to its people. “I think we have a solid management team here supported by a staff of people both on the factory floor and in the office that think very similarly – customer satisfaction is job No. 1,” he says. “The second is the product itself.

It’s a unique and very difficult technology to replicate.”

Lueders praises Koso’s culture. “We’ve got a very collaborative, highly motivated team,” he says. “It’s a delightful work environment to be in. It’s challenging, and it’s also very fulfilling.” **mt**



**Together, we can provide solutions incorporating self-contained hydraulic rotary mounted actuators for process valve applications.**

Parker Hannifin hydraulic rotary actuators incorporate industry leading rack-and-pinion technology utilizing the most efficient spur-gear design. Parker Hannifin provides premier engineering services for Steel, Alternative Energy, Marine, Oil & Gas, Process and Mobile applications with over one hundred years of design experience.



**ENGINEERING YOUR SUCCESS.**

269-629-5000

[www.parker.com/pneu/htr](http://www.parker.com/pneu/htr)