

GLOBAL SHOP SOLUTIONS CASE STUDY

Great Western Valve, Inc.

Located in Houston, Texas, *Great Western Valve, Inc.* repairs and remanufactures control valves, pipeline valves, and relief valves used in the refining, petrochemical, pipeline, power, and pulp and paper Industries. The company's skilled workers service all makes and models of automated control valves, pipeline block and bleed isolation valves, and triple off-set butterfly valves. They also repair and remanufacture instruments and positioners.



A Fisher Control valve used to control the ethylene oxide flow inside of a process unit.



A Grove Gate valve used to empty the tank on a very large crude oil tank.

Founded in 1990, Great Western Valve uses the latest in equipment and machinery – including a nuclear metallurgical device that analyzes the molecular structure of metal – to ensure their *valve repair jobs* meet the highest quality standards. Their repair and remanufacturing plant encompasses seven buildings, including a receiving/breakdown shop, quality control and production offices, a fully-certified welding facility, a fabrication and machine shop, and an assembly and testing center with computerized testing equipment. Great Western Valve is an ISO 9001:2008 certified company and is also API compliant.

To manage their complex breakdown, analysis, and repair work processes, Great Western Valve also relies on a sturdy, well-built product – Global Shop Solutions ERP software.

Like so many manufacturing companies that pre-date sophisticated ERP software, Great Western Valve managed to get by for years with a hodgepodge of accounting and database programs. When Vice President of Operations Michael Kouloumoundras could no longer tolerate having to go in and out of different databases to produce a simple invoice, management decided the time had come for a change.

“We were using many different programs to track business through the shop,” recalls Kouloumoundras. “They worked reasonably well when we were a smaller company. But as we grew, we realized we needed one integrated system to tie everything together from start to finish.”

“I have a background in network administration and architecture,” adds Kouloumoundras. “So I set out to find an affordable ERP system that we could use out of the box but could also grow with our company. After researching several different ERP systems, Global Shop Solutions ERP software clearly stood out from the rest.”

Custom Valve Roster

Great Western Valve went live with the software in the summer of 2009.

Like many Global Shop Solutions ERP software customers, they started out small, preferring to focus on a few key areas. Since then, they have continued to expand their fluency with the software, and now use Global Shop Solutions ERP software from start to finish on every repair job that comes through the door.

Great Western Valve has simplified operations and cut costs throughout the company with the ERP software. But nowhere has it made a bigger difference than with the valve roster – a custom [Global Application Builder \(GAB\)](#) database program that makes it easy to track, collect, and manage the large amount of information required for each valve repair job.

“One of the unique things about our business is that we never repair a valve the same way – there’s always some variance between jobs,” notes Kouloumoundras. “And every valve we work on comes with a lot of detailed customer specifications. So we needed a way to quickly and efficiently bring all this data together on each job.”

“I had created an Access database to produce all the reports we wanted, but it was cumbersome and time consuming,” says Kouloumoundras. “I asked Global Shop Solutions [Continuous Improvement Team](#) if they could use GAB to replicate this unwieldy process within their system. They quoted me a price and gave me a time estimate, and I said ‘go for it!’ We now have separate valve roster programs for control valves and safety valves, and they’ve turned out to be a huge time-saver and a great investment!”

Managing a Complex Workflow

To comprehend the full value of the valve roster program, it helps to understand Great Western Valve’s complex workflow.

A valve arrives at the shop for repair or rebuilding, usually accompanied by detailed customer spec sheets that include information about internal components, type of metal, and any specific valve requirements. Workers review this data, inspect the valve, and use Global Shop Solutions ERP software to send the customer a best-case repair quote. They also use the [Document Control™](#) feature to automatically attach the spec sheet to the quote.

When the customer sends in a purchase order, it sets the repair process in motion by generating the work order and routers in Global Shop Solutions ERP software. Any unique customer specifications, such as only using stainless steel bolts, are captured on the router.

“The work order is the critical element in our operation,” explains Kouloumoundras. “Throughout the production process, people are charging their time and issuing materials from inventory to work orders – two critical tasks made much easier by Global Shop Solutions.”

Before tearing down a valve, workers take four pictures of it – one from each side. They upload these images to the valve roster, which automatically ties it to the work order within the ERP software. Once they begin tearing down the valve, workers clock onto the work order by scanning their barcoded badges. This enables management to easily see how much time they have in a job and where it stands at any point in the repair process.

When the valve arrives on the shop floor after initial inspection, the work order number generated by the ERP software gets stenciled on the valve to provide traceability throughout the shop. Workers then stroke the valve to record where it opens and closes – information that also goes on the valve roster. Then they tear down the valve, sandblast it, and inspect the component parts.

To ensure they use the right materials, workers use a positive material identification (PMI) scan to identify the valve’s specific metallurgy and compare it to the customer spec sheet. This data also goes on the valve roster. Any discrepancies between the spec sheet and PMI scan are immediately reported to the customer. Workers then take photos of the damaged component parts, upload them to the valve roster, and send them to the customer with an estimate of repair costs and completion date.

“When the customer gives the final go-ahead, we generate the sales order within Global Shop Solutions and release the valve to the shop floor,” says Kouloumoundras. “We repair all the parts and send them to quality control. After passing inspection, the valve gets sent back for assembly, where workers put it back together, test it, and upload the results to the valve roster.”

“We prepare the final documentation and send the repaired valve back to the customer,” concludes Kouloumoundras.

More than Just a Time/Money Saver

The valve roster is a database program embedded into Global Shop Solutions ERP software. Like everything else in the system, it is easy to access, easy to use, and fully integrated with all the other modules. According to Kouloumoundras, the ability to access individual valve data from one central location does more than just save time and money – it literally changes the way people work on the shop floor.

For example, the valve roster program takes most of the forms on the shop floor that people were filling out by hand and puts them in electronic format, allowing Great Western Valve to retain all the data in one location. Shop floor people can go to their [Shop Floor Data Collection](#) station, launch the valve roster, and get all the information they need about a particular work order. Instead of creating separate reports, quality control people input most of their information into the valve roster. Even the people in sales and customer service can access the valve roster when working over the phone with customers.

“The best thing about the valve roster program is that it can scale with us as we grow,” says Kouloumoundras. “We started small, with three forms used on the shop floor, and built on from there. Soon after implementation, we added the workscope and pictures to the mix. When we developed the safety relief valve product line, we expanded it again.”

Tighter Inventory Controls

Several factors unique to Great Western Valve make it difficult to manage [inventory](#). The company keeps a lot of vendor-supplied finished goods in stock for the valves they repair. But they also purchase used, damaged, and surplus valves without knowing when or where they will use them. These get stored in an off-site warehouse, where workers tag and categorize them with bin numbers and labels.

“We don’t have your traditional inventory that’s wrapped up on a shelf waiting to go to a customer,” explains Kouloumoundras, “so we need a good system for managing it. Since implementing Global Shop Solutions, we’ve moved to computerized inventory, which makes it much easier to track inventory and find a specific valve when we need it.”

“We still handwrite the physical part number on a tag and put it on the valve,” says Kouloumoundras. “But with Global Shop Solutions, once we enter the part number in the system and a purchase order gets issued, we know that incoming inventory will get received to the right bin. Once we make the switch to barcoded inventory, which we plan to do in the near future, it will become even more efficient.”

Impact on Every Area of the Business

As with the valve roster, Kouloumoundras appreciates Global Shop Solutions ERP software’s ability to grow with the company.

“In a company with 40 people, you don’t have all 40 people buying parts,” he says. “So initially there wasn’t a need for different levels of authorization for purchasing and other areas of the business. We have grown a lot in the past few years, and now have five people buying. With Global Shop Solutions, it’s easy to set limits and assign authority without slowing down the purchasing process.”

What Global Shop Solutions ERP software feature or function does Kouloumoundras like the best?

“That’s hard to answer because it has impacted every facet of our business,” he says. “We recently compared where we were three years ago with Global Shop Solutions to where we are now. We started using it slowly and have steadily incorporated different pieces of it. Now we use almost every module in some area of the company.”

“That said, I really like the functionality of Global Shop Solutions,” says Kouloumoundras. “It’s easy to use and understand, and our people picked it up fairly quickly. Global Shop Solutions has tied our entire business together, and we’re now three times the company we were when we installed it.”