



Blacoh Industries: Applying innovative techniques and technologies to support aging facilities

Blacoh Industries, a California based company, provides customers with safe and reliable engineered products that improve the performance of fluid processing systems, especially in aging facilities.

Currently in the United States, and all over the world, many of the factories that are producing industrial equipment, commercial goods and chemicals are approximately 50 years old.

The infrastructure of these plants is old, but so is the equipment inside the plant.

Blacoh's approach to this problem is from a perspective of safety since as equipment ages, it needs more maintenance. Of course, it would be a lot easier just to build a new facility from scratch but that isn't a very feasible or financially viable solution. Therefore, the existing infrastructure requires regular maintenance and that is exactly where Blacoh comes in: to make this experience as easy for the customer as possible. Instead of fighting against the old technology in aging plants, Blacoh works along with it by implementing new business models and techniques to address the problem.

Managing Aging Plants had the pleasure of speaking with Blacoh Industries' President, Mr. Andrew Yeghnazar, about its new fulfillment center in Germany, its state-of-the-art products and why it's so important to think differently about the problem of aging infrastructure.

By Candace Allison



Success story

"Let me start by saying that Blacoh was founded in 1976," Mr. Yeghnazar begins. "Last year we celebrated our 40th anniversary, which is a big milestone. It's also nice that in this day and age we are a privately held company that is growing up very well in an environment where many smaller companies have been acquired or merged. That we've been able to grow and remain privately held for forty years demonstrated that working hard to provide excellent service and solve customer problems is a strategy that works."

Blacoh Industries is the umbrella company that encompasses several individual, yet connected, business segments including *Blacoh Fluid Control*, which offers industrial products for pumping and fluid processing systems; and *Blacoh Surge Control*, which provides customized engineering solutions for surge protection, pressure regulation, storage and pump control. These segments work together to succeed as one of the world's premier sources for fluid control solutions. Blacoh Fluid Control was

the original company that began operations in Riverside, California, USA. From the very beginning Blacoh Fluid Control offered products such as pulsation dampeners, accumulators, seals and valves. This equipment helps protect and optimize the performance of fluid systems. This segment of the business works through a global distribution network where Blacoh partners with both OEMs and key global distributors around the world.



A global presence

All the business segments, including manufacturing facilities, are headquartered in California, but it has always been part of the company's strategic vision to globalize. Prior to 2012, Blacoh was very much an American-centric organization that mainly focused on being the leader in the area of pulsation dampening and fluid control. The Blacoh management team made a strategic shift to invest in expanding the company profile and product offerings in addition to bringing on experts in specific locations who could help develop local business. Internationally, Blacoh has a presence in Austria, Argentina, South Korea, China, Australia and Germany. In fact, as of December 1, 2017 operations started at Blacoh's brand new fulfillment center located in Maintal, Germany, which is approximately 30 minutes outside of Frankfurt.

Yeghnazar explained that the decision to be based out of Germany was two fold: firstly to effectively service German customers in their own time zone and currency, and secondly, to improve lead time and reduce shipping costs for the rest of Europe at the same time. He further clarified, "We've been working on this for a while and it is all part of us as an American focused business going global. Our approach is what I like to call going 'glocal': we are a global company but we try to be local in everything we do. The 'Made in USA' is very big for us, we're manufactured and sourced in the USA, but now we have taken our expertise globally. We did that first in Asia and Australia, but we wanted to take it to the next step. So looking at the European market we believed it would be important to have a physical local presence."

State-of-the-art products
The SPILLSTOP™

Blacoh was able to establish a local presence in Germany, the largest market in Europe, because over the last few years it has developed products that can stand alone off the shelf. Most of the company's business is engineered or designed according to exact specifications however it has recently developed products that can be stocked and used without significant customization. A prime example of this is Blacoh Fluid Control's SPILLSTOP™ leak containment system. It is a product that was specifically designed for the use with Air Operated Double Diaphragm (AODD) pumps and can be used in almost any application. This fully pneumatic system safely captures leaked product and automatically shuts down failed pumps to eliminate costly product loss and prevent hazardous spills from occurring. The device attaches directly to the exhaust of an AODD pump. When the pump diaphragms fail, process fluid that would have spilled out through the pump's exhaust is instead captured in the product's internal receptacle. This allows customers to plan for unexpected failures and handle them safely.

Safety is a primary focus not only for Blacoh but also for many producing companies. Yeghnazar shared that a large order was just received for the SPILLSTOP™ from a leading global chemical manufacturer. This is because, "the SPILLSTOP™ is now a best practice with that customer. That means when those companies are looking at their plants aging they are putting the SPILLSTOP™ units in their facilities to protect them. In fact, everywhere there is an AODD pump at either of those company facilities, it is hooked up to a SPILLSTOP™. We are actually consider-



ing taking this concept and applying it to other technologies to help contain any spills or failures that occur in other types of machinery. That is what our innovation team is working on right now."

SENTRY Pulsation Dampeners

Another quality product from Blacoh Fluid Control is the SENTRY Pulsation Dampener, which is used on the intake or discharge of a pump. When a positive displacement pump is pumping fluid, there is a pressure pulse that is created during each displacement and when that happens, energy is transmitted to other components of the fluid system. That energy being put on a piping system can cause it to shake and rattle, and if that happens consistently over even a relatively short period of time, the pipe can break causing damage. In a lot of older facilities the majority of piping is overhead so after a while with all the pulsation there is a certain amount of stress placed on the pipe hangers holding the piping up, which is incredibly dangerous. So Blacoh's SENTRY Pulsation Dampeners help to ensure the longevity of the piping system by making sure there is smooth flow and

reducing or eliminating troublesome pressure pulsations.

SurgeWave™ Transient Monitoring System

Blacoh's other business segment, Blacoh Surge Control offers the SurgeWave™, which is a transient pressure monitoring device very applicable to aging infrastructure as it acts like a stethoscope for a pumping station or piping system. Yeghnazar described it as being a technology that can identify what happens to the fluid dynamics within the piping system if a certain event happens, such as the power going out or if the pump shuts off automatically. "Things like

Giving back through education

Blacoh University, available at www.blacoh.com, offers complimentary resources and videos to help educate about various water and fluid related topics. The goal is to provide educational and useful resources in the flow control industry. As Mr. Yeghnazar explained, "We have graduated hundreds of people because our approach is part of giving back to help people in the industry who are not experienced in a certain area, such as fluid dynamics. Blacoh University has developed a good depth of content both in the form of short videos as well as hour-long sessions, which provide solid data and training. In fact, many engineering companies are even having their employees watch and learn from the videos as well, just like a refresher course."



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that can cause a major spike or drop in pressure and when you then have aging pipes within an older facility, you can have a failure that will cause leaks. We're not trying to fix the leaks right now. Instead, we are looking at being able to prevent them by being able to mitigate those transient occurrences through the use of custom designed vessels that will capture that energy or extra pressure. What we are trying to do is help those aging systems last longer. By using the SurgeWave™, we're able to go in and help identify what the root cause of the issue is and then solve it."

He continued to explain that a lot of companies are exploring predictive technology, that is, being able to predict when a pump or a piece of machinery needs to be fixed or serviced. Blacoh instead is focusing on taking this technology one step further to identify and eliminate the causes of failure and the SurgeWave™ Transient Monitoring

System is an important part of that. Every year in the USA there are 240,000 pipe leaks, costing approximately USD \$2.8 billion to fix, and that still equals a water loss of approximately 7.7 billion gallons every single day. One of Blacoh's missions is to find ways of preventing this loss, which has quickly become a global epidemic. "Part of the Blacoh Surge Control strategy is getting involved in technologies that help identify where these leaks are, or better yet, to intuitively predict where they are going to happen and find ways of actually preventing leaks from happening."

Thinking differently about aging infrastructure

Yeghnazar maintained that it's not just innovative products like the SPILLSTOP™, SENTRY Pulsation Dampeners and the SurgeWave™ Transient Monitoring System that will help solve the current problem of dealing with aging infrastructure. It also

Blacoh's Product Portfolio

Blacoh Fluid Control:

- SENTRY Pulsation Dampeners & Surge Suppressors
- SENTRY CIP Sanitary Dampeners
- SENTRY Inlet Stabilizer
- SENTINEL Diaphragm Seals
- SENTINEL Back Pressure & Pressure Relief Valves
- SENTINEL Calibration Columns
- SENTINEL Injection Quills
- SPILLSTOP Leak Containment
- Hybrid Valve™ AODDampener™

Blacoh Surge Control:

- Bladder Type Surge Vessels
- Surge Shield™ Vessels
- Computer Surge Analysis
- SurgeWave™ Monitoring System
- Air Vacuum Valves
- Control Valves
- Check Valves
- Actuated Valves
- Control Panels

calls for people to start thinking differently. He concluded by stating, "This is why I talk about the new type of business model because you also need people to open their minds to the opportunity to do something new and different. Blacoh can benefit from those opportunities because we are willing to transform ourselves as customer needs evolve. For an older plant to go through an internal revolution in order to maintain its aging equipment, it requires people to also think differently. That is what we are trying to do. Internally and externally we are trying to get people to think in a different way about the same problems in order to solve them better and more efficiently."



Blacoh Industries at a glance

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| Company name: | Blacoh Industries |
| Founded: | 1976 |
| Global Headquarters: | 601 Columbia Ave, Building D, Riverside, California 92507 USA |
| Products: | <i>Blacoh Fluid Control:</i> Pulsation dampeners, surge suppressors, inlet stabilizers, accumulators, diaphragm seals & valves and leak containment <i>Blacoh Surge Control:</i> Surge vessels, monitoring systems, air vacuum valves, control valves, actuated valves and control panels |
| Industries: | Chemical & petrochemical, food & beverage, oil & gas, power generation and water & wastewater, etc. |
| Website: | www.blacoh.com |