

Issue 58

Working Together

Mid-South Engineering Company

Second Quarter, 2016

Your Piping Systems May Deserve a Second Look

By: Rob Bullen, P.E.

Just about every building or facility has that one thing that seems to be "out of sight - out of mind..." and most people are just happy to let that be. The item that I am referring to here is piping, and to be honest, it is more than a little bit errant to call it that one thing. The truth be told, most facilities have many piping systems: Potable water, process water, fire protection water, sanitary sewage, storm water, compressed air, natural gas...and the list goes on.

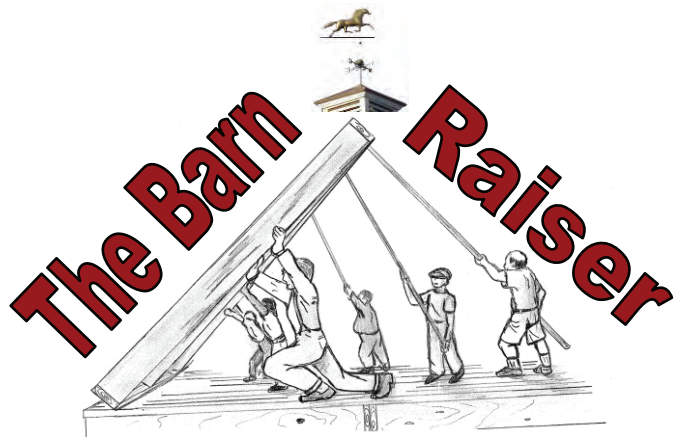
Most of the time, these systems never get a second look. That is until there is a problem. While piping systems do not generally have an awe-inspiring appearance, and rarely even seem noteworthy, many of these systems have the ability to singlehandedly bring a plants production to a halt. When the full potential of a system failure is realized, it is not difficult to understand the benefits of a properly designed and maintained system.

Compressed air, for example, can be one of the most useful systems in an industrial plant, but also one of the most wasteful. When work needs to be done, compressed air is there: to blow the area clean, to power the pneumatic tools, to operate cylinders or actuators, to operate instrumentation, etc. Compressed air is one of the most versatile systems in an industrial plant. A lot of time, equipment, and money go into supplying that air. There are compressors, cooling systems, dryers, filters, and yes... piping. While many people look at the efficiency of the "equipment": compressors, coolers, dryers, and filters, many of them overlook the significance of the piping that gets that air where it needs to go. The difference between a well-designed and maintained piping system and a field-designed, poorly planned, or unmaintained piping system is significant...see our newsletter article in the third quarter issue of 2002 to see some costs impacts.

Fire protection water piping may not be as utilitarian and versatile as compressed air, but when there is a disruption in its service, it can bring a plant to a halt. A poorly designed system may cause unplanned outages costing hours or even days of lost production. This is especially true if the piping were routed in such a way that a break undermined foundations for buildings or major equipment. Sometimes, there are no "simple fixes" for a poorly designed and installed system, but in some instances, the modifications can be surprisingly "down-to-earth". The use of Post Indicator Valves (PIV's) at strategic locations can help ensure that any system outages are localized to minimize the effect on plant operation. While many risk management companies perform evaluations of underground fire protection systems, there are two main items to consider: (1) they can only evaluate what documents they are given; and (2) they are evaluating for safety, not the plant's convenience. Even if your system is "functional," it may cost unnecessary downtime if it is not properly designed.



Each of your piping systems has its own potential pitfalls, but they may share one common theme: "out of sight - out of mind." This may be one of the costliest oversights in plant design (in the case of new systems), or plant maintenance (in the case of existing plants). Proper system review, design, and installation may make more than good sense... it may save a significant amount of dollars.



Issue 58

Working Together

Mid-South Engineering Company

Second Quarter, 2016



Sandy McWilliams

We lost a beloved employee and friend, Sandy McWilliams, recently to cancer. Sandy was a talented designer and drafter, who had worked for Mid-South Engineering for over 38 years, having started in 1978. Sandy worked in several roles over the years and always did more than was asked of her. She oversaw the drafters and designers for a number of years, worked as a lead designer and for more than the last decade worked in our Planning & Development group. Sandy always took ownership of her part in a project and wanted to contribute to the final success of any undertaking. As a result of her attitude and involvement, our clients benefitted from the contributions she made each and every day. Sandy was never concerned with the accolades, but only wanted the realization that all the goals of our customers were met. Many of you likely were the beneficiaries of Sandy's efforts, yet never got to meet her face-to-face.

We provided a few pictures of Sandy, for those of you who may not have had the opportunity to meet Sandy to see her smiling face. Sandy was also a silent partner in this newsletter and deserves the credit for us producing useful information since we started in 2002. We wanted to dedicate this issue of our newsletter to Sandy and the memory of our dear sister and colleague.

"In the tradition of a community coming together to raise a barn, Mid-South Engineering is committed to working with our friends and neighbors as partners, knowing we can accomplish more by working together, with the common goals of lifting each other's burdens and side-by-side framing our future for the better."



**MID-SOUTH
ENGINEERING**

Corporate Office

1658 Malvern Avenue - Hot Springs, AR 71901

501-321-2276 - FAX: 501-624-4214

Cary Office

200 Mackenan Dr. Cary, NC 27511

919-481-1084 - Fax: 919-481-1184

Millinocket Office

70 Spring St. Millinocket, ME 04462

207-723-6871 - Fax: 207-723-6872

www.mseco.com

Experience and Innovation Working for You