

Swagelok Pittsburgh | Tri-State Area

# **e-FLASH**

Your Industrial Fluid System Safety Checklist

Optimized worker safety. Optimized system performance. Optimized end product.

CHECK

FIRST

By following a few critical operational steps, you can ensure that what you produce is done via a safe, timely, efficient, and top-quality process:

simplify your system design wherever possible

In other words, if you simply reduce the number of connections, you automatically reduce the potential for overall failure or dangerous and costly leakage.

**SOLUTION:** Employ bent tubing versus piping and instantly simplify media directional changes...while slashing maintenance frequency, labor, and costs.



SECOND, consider operating conditions when designing your system

Remember that your system is de-energized when assembled, so keep key conditions like vibration, high pressure, temperature, and other factors top-of-mind



during design.

FOR INSTANCE, perhaps add supports to ensure tubes and fittings won't become fatigued during high-pressure use. Or you might want to employ hose, not tubing, where severe vibration is likely.



You can best assure consistent and leak-tight seals - that can withstand high pressure, vibration, and vacuum/temperature changes - by not swapping fitting hardware from one manufacturer with another. Tolerances, for one thing, may not be



uniform, one fitting maker to the next. Any incompatibility would likely lead to unpredictable performance, including leakage and possible safety issues.

FOURTH, closely follow the component manufacturer's instructions

This particularly applies to assembly and disassembly procedures. By doing so, you'll help eliminate the risk for:

 Under-tightened fittings that could cause leaks and blowouts



- Tubing not firmly resting on the tube fitting body prior to tightening
- Tubing ovality, defects, or scratches that could compromise a seal
- Wall thickness extremes that exceed a manufacturer's limitations
- Insufficiently pulled up tube fittings

## FIFTH, specify the "right" componentry

That means you should always completely understand your process conditions before choosing the fluidsystem products for your applications.



#### FOR EXAMPLE, if a

static charge is involved, you would need a hose with a conductive metal core or a PTFE core with carbon black. You also want to ensure that your tubing materials are compatible so they stay connected. You would not want to match brass fittings with stainless steel tubing because the softness of the brass would not provide enough grip.



By just a few simple additions, such as detailed tags to indicate what takes place within a system, could greatly help your technicians to make adjustments and avoid major mistakes. Color coding valve handles, tubes, and pipes throughout your plants - to indicate just what fluids or gases are flowing through your lines - reduces room for error, too.



For additional information on Swagelok Fluid-System **Evaluations and Advisory** Services, contact:

#### Gary Osman, **Swagelok Field Engineer**



#### WE DELIVER DIFFERENCE-MAKING SOLUTIONS:

Products Strategic Support Services Application Know-How



### The Brand. The Inventory. The Expertise.

WE'RE YOUR SWAGELOK FLUID-SYSTEM SOLUTIONS PROVIDER





#### WE CAN HELP YOU SAVE TIME, MONEY, AND WORRY:





Swagelok Pittsburgh | Tri-State Area 49 Meade Avenue, Pittsburgh, PA 15202 412.761.3212

All service marks and trademarks shown are owned and registered by Swagelok Company. © 2023 Swagelok Company. www.swagelok.com

You are receiving this email as a valued contact of Swagelok Pittsburgh | Tri-State Area.

Preferences | Unsubscribe