

Proper tube handling and preparation – before your tube fittings are tightened – are critical and often overlooked steps in the installation of safe, leak-tight, and long-lasting quality fluid-system connections.

System leaks, of course, can be extremely dangerous – especially in gas and high-pressure applications. But they can also result in major inconveniences such as the loss of air pressure causing a valve to fail to open at the designated time. Leaks can easily lead to lost production as a system running at less than

optimum levels for an extended time drains site profits. In addition, if chemicals and/or gases leak out of a system, not only is a significant hazard created, but raw materials are thus wasted as well. Even the smallest air leaks can lead to you spending more money to run your valuable plant equipment.

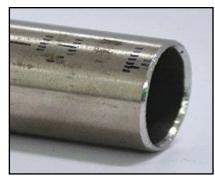
So, how do you spot some common – and sometimes hidden – causes of failure?

First, learn how to expertly prepare tubing: Know how to cut it squarely to create an angled end. To avoid compromising the integrity of a seal, make sure to then debur or file the ends of any tubes that have been cut. The more time and attention you devote to your tubing activities before installation, the fewer, and less severe, your future system safety and performance issues.

Secondly, have the tools readily available to cut and debur: hacksaws, tube cutters, rasps, files... Anything relevant to executing a clean, square cut.



Tubing not properly deburred.



Tubing properly cut and deburred.

Improper handling results in scratches, nicks, and dents. Say a worker pulls a 20' stick of tubing from a container, cuts a 6' piece, then slides the remainder of the stick back onto the rack. If the end of the cut piece isn't deburred or filed, the other tubing still in the container will likely be nicked or scratched. Denting usually occurs when the end of a stick of tubing hits the ground when pulled off the rack. Any of these imperfections, no matter how slight, can dramatically impact the performance of your system.

Get Trained:

Swagelok Pittsburgh | Tri-State Area offers a renowned, all-day Tube Fitting Installation and Tube Bending Safety Essentials class – at our Pittsburgh Training Center OR at your facility or project location. Students will graduate knowing how to pull up a tube fitting, bend/cut/debur tubing of various compositions and diameters, and so much more to minimize scrap, waste, and downtime. No one will leave not understanding the crucial nature of material handling and inspection.



Support:

For our complete story, visit www.swagelok.com/en/blog/proper-tube-preparation

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