

*The Gas Works Where the Spark Fails. Introducing . . .*

# THE HELIUM LEAK TEST

Imagine a process that detects holes in fluoropolymer-lined tanks **just 1/100<sup>th</sup> the size** that today's spark test can detect. Now imagine the process does not degrade the liner or leave any residue like a spark test can. And for good measure, this process were as easy to use and affordable as a spark test.

**Imagine no more.**

**Electro Chemical has made it a reality!**

After 3 years of research and development, **Electro Chemical** has perfected the **Helium Leak Test** for use with fluoropolymer-lined containers that store, transport, and handle corrosive chemicals.

**It's an extraordinary leap forward in the installation and non-destructive testing technology of fluoropolymer linings.**

## Helium Leak Testing . . .

- Finds **much** smaller flaws
- Improves your liner's integrity & lifespan
- Reduces equipment "out-of-service" downtime; liner repairs are fewer & quicker
- Helps minimize your risk of a leak and a possible environmental incident

## IMPACT AND BENEFITS OF HELIUM LEAK TESTING

Spark testing can actually be a destructive test that can degrade the liner and create additional points of failure. The current used during a spark test can create micro-arcs that stress the liner and leave a residue of burnt material around the detected flaw. Imagine what that can do to your liner, year after year, as you comply with repeated testing requirements, such as DOT HM-183 requirements.

**But, with our new Helium Leak Test, no damage occurs to the liner during the test and no residue is left!**

**Not only that, we can find flaws that are just 1/100<sup>th</sup> the size of the smallest leak a spark test can find.**

You're able to repair these micro-flaws **BEFORE** they do any substantial damage.

**Imagine the economic impact this technique will have on your fluoropolymer-lined equipment!**

- ▶ **Lower Repair Costs** – fixing microscopic holes before they become larger and more expensive.
- ▶ **Longer Liner Lifespan** – finding more flaws and fixing them sooner leads to higher reliability.
- ▶ **Improved Productivity** – fixing flaws sooner means fewer big repair jobs. That translates to less downtime for these valuable assets.
- ▶ **Reduced Risk of Leakage** – With the improved integrity of your fluoropolymer-lined equipment, we reduce the risk of disastrous leaks during transportation, storage, and use.



# HELIUM LEAK TESTING – INCREDIBLY COST-EFFECTIVE

**Electro Chemical** can also deliver this advanced technological improvement at a very economical price! It's only a bit more expensive for us to perform than the standard spark test! When amortized over the capital investment you make in your fluoropolymer-lined vessel and the number of years it will be in service, the price difference becomes negligible!

## HOW IT WORKS

We install a specially-designed port and inject helium behind the liner. We then allow time for the helium to travel beneath it. Once we know helium has spread throughout this interstitial space, we use a mass spectrometer and sensor device to identify if and where helium leaks through the liner.



While the overall description may sound simple, it's not. There is a little more to it than just that. And much research went into learning how to ensure that helium really does reach behind **every** square millimeter of the liner. And how best to detect any micro-flaws.

We also had to accommodate every possible variation in equipment configuration. **We needed to make it work every time – no matter how the liner and welds were laid. And we have.**

Only **Electro Chemical** has the know-how to make this new process work reliably.

## HOW YOU CAN GET STARTED WITH HELIUM LEAK TESTING

Take advantage of **Helium Leak Testing** to improve your liner lifespan, lower your maintenance costs, reduce lost man-hours due to out-of-service lined equipment, and lower your risk of environmental disaster. **Connect with Mike Amant at [mamant@electrochemical.net](mailto:mamant@electrochemical.net) or at 610-965-9061, ext 223 to learn more.**



*Since 1949, Electro Chemical has been at the vanguard of the war on industrial corrosion. In the early 1980s, we pioneered the first commercial fluoropolymer coatings and linings for corrosion protection systems, and we maintain our industry leadership position today.*

*Internationally known for the reliability and durability of our systems, our commitment to continuous innovation provides us the edge in solving our customers' most demanding corrosion protection problems.*

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