When you know you’re the best, sometimes it’s easy to forget why you’re the best. For one hundred years, the Armstrong Inverted Bucket (IB) Steam Trap has consistently proven to be the best and longest-lasting steam trap on the market. The daunting challenge of generating valid head-to-head test results led to proving many advantages we’ve always known about—but had never proved empirically. We’ve all heard the saying: “The first lie is the one that people remember.” And anyone who’s been in the steam business knows overzealous salesmen have been known to spread misinformation through their claims. That often puts Armstrong International in a position of refuting false claims that should never have been an issue.

When the world’s largest refiner wanted objective testing of leading steam traps, it turned to the Armstrong testing board—the only test apparatus in the United States certified by the American Society of Mechanical Engineers (ASME) PTC 39.1. An objective independent study of new and used steam traps was conducted, following strict guidelines and supervision to ensure fairness.

“We tested 43 different traps from seven manufacturers,” says Jay D’Amico, president of Louisiana Steam Equipment Co. (LA Steam). “This included five IB traps that were more than 22 years old, and most of them tested well. Some tested even better than new.”

“Like many customers, they often replaced traps based on their age rather than their performance,” Jay says. “Because of experience with other trap designs, if a trap made it to ten years, it was routinely replaced rather than being tested.”

The test involved brand new traps as well as traps that had been in service. Test parameters were established by the customer to eliminate any testing bias. “We were proud to be included and have the tremendous facility provided by LA Steam for testing,” says Randy Waldrum, Director of Global PetroChemical Markets. “But the rigors of the tests and anticipating the unknown results made us squirm a little.”
**BENEFITS:**

*The results were conclusive.*

Older Armstrong IB Steam Traps were sourced from the representative’s inventory and from one of the customer’s least-efficient sites. Because Armstrong date stamps our traps, we know that some of those traps were over 25 years old. By testing these traps, we also learned trap failure was not the reason for the inefficiency in the plant. The majority of the traps still worked well—some even better than new. In fact, no competitive traps of that vintage could be found operating in any of the sites. “The effects of sulfur and pressure had taken their toll on the systems, but it actually made some of the IB traps seat better,” notes Jay. “And the plugging of some of the competitive traps just wasn’t a problem for the IB traps.”

“The tests confirmed the performance and longevity we all knew from experience and previous testing,” Randy adds. “For example, just by looking at our flange retainer ring, you can tell it’s the strongest in the business. But how strong? And is it simply over-designed?” The discovery of a cracked flange retainer ring during the tests cast concern about the construction and safety implications of a competitor’s trap. That discovery reframed the test procedures and led to the development of a unique apparatus to measure the sheer strengths of the flange retainer ring of several traps. “Technically, we are not doubting the competitor’s flange retainer ring design,” Randy explains. “But seeing one that was cracked challenged the customer’s confidence in the construction and safety of that product.”

The top-line results of the study indicate all the traps in the test were statistically similar when new, but the total cost of ownership was significantly different. Armstrong IB Steam Traps provided longer life and greater lifetime value. By supplying the ammunition to preempt misinformation, the results let us establish the standards for comparison where they belong—solidly with the IB Steam Trap.

“We can’t forget that with the IB trap, we’ve got the best story in the business,” Jay says. “But with so many competitors out there, there’s a lot of misinformation being spread.” Building confidence was a key part of the success of that testing—trust in both the capability and the problem-solving skills of our people. “The word ‘trust’ came up a dozen times during our post-test review,” Jay explains. “They really appreciated our commitment to objective testing and our willingness to openly share information. They knew that if there was anything wrong with an IB trap, they would know it, and we would own up to it.” Education is one of the Armstrong 4 E’s. Those trap studies are just one more example of how Armstrong continues to learn—and lead. For over 100 years . . . and counting.