

A Visit To China

Opening New Doors of Opportunity

According to the BBC News company, China now has the fastest growing economy in the world. Which means developing key relationships with the right company(ies) is not only wise but prudent.

To this end, Litron has taken steps to start a dialogue with Tianyi Welding, a global company selling welding and cutting equipment. Company president Mark Plasse and systems department head Andrew Agoos spent a week in Shanghai getting to know the team at Tianyi. They were treated exceptionally well by their hosts and laid the groundwork for future dialogue and cooperation.

We wanted to thank the team at Tianyi for their hospitality and generosity in meeting with us. We are looking forward to growing a relationship that lasts many years and is mutually beneficial for us all. To learn more about Tianyi, you can visit their website at www.tianyiweld.com



Equipment Update

Improving Our Leak Testing Capabilities



With the addition of a TITANTEST Helium Leak Detector from LACO Technologies, we now have the capability to test to the -12 scale. This is a major increase in detection then our current machines which are able to test to the -9 scale. This machine has the capability to test in gross, fine or ultra modes and self calibrates with a built in helium calibration leak standard. This level of detection

will give our medical and aerospace customers even more assurance of hermeticity.



Waves of Change

What's going on at Litron?

- Leak Testing Capabilities have greatly improved with our new TITANTEST Helium Leak Detector from LACO Technologies which gives us the ability to test to the -12 scale.
- Litron visited China to discuss a relationship with Tianyi Welding Company and our Laser Systems Division. See main article.
- Ambri, a company dedicated to building energy saving storage solutions for the electricity grid, is featured in our customer spotlight on page 2. Check it out and learn more about what Litron and Ambri have been working on.
- Be sure to keep an eye on our website, changes are coming shortly. We are working to make the site more mobile friendly while also refreshing the design.



Ambri and Litron, Helping Build a More Efficient Future

Providing Hermetic Sealing Solutions to Improve Ambri's R&D

As they note on their website, Ambri is developing an electricity storage solution that will change the way electric grids are operated



worldwide. Ambri will enable the more widespread use of renewable generation like wind and solar, reduce power prices and increase system reliability. Ambri's technology, the liquid metal battery, was invented in the lab of Dr. Donald Sadoway, a professor at the Massachusetts Institute of Technology.

During the initial development of Ambri's technology, traditional means of joining were used such as TIG welding. Unfortunately this form of welding uses a lot of heat throughout the parts being joined and can effect components outside of the intended weld area. "We needed to create hermetic welds with less heat than TIG welding in order to prevent other components within our technology from breaking" said David McCleary, Senior Engineer at Ambri. "The geometry and materials we wanted to use were familiar to Litron, so they had specific laser lens and weld parameters to achieve the goal of the project."

"Ambri came to us with their components and we could see how the TIG welding was having an impact on the different parts. The amount of heat that is needed to do a proper TIG weld was having a severe impact on the rest of the parts" said Mike Chmura, Laser Services Manager at Litron. "The biggest challenge for us was in the tooling. The parts needed to be held just right for our lasers to be efficient and effective. We knew we could reduce the amount of heat going into the part, while still getting a solid hermetic weld once we had the tooling setup. The Ambri team has been very receptive to our input and feedback on their designs and fit-ups and it has made our weld development and process go much smoother"

"Litron has made successful welds right from the onset of this joint project. They provided the weld parameter suggestions and we provided the testing and analysis to determine if the welds met our expectations. Litron provided ample attention and communication as well. Also, each person I interacted with was professional, knowledgeable, and easy to work with" said McCleary. "Working with Litron has gone as well as I could have expected. The team is technically sound and professional, and communication is prompt and clear. I look forward to continuing development of our technology with Litron in the future."

Litron would like to thank Ambri for choosing us as your laser welding partner. We look forward to continuing our work with your team in the coming months and years.

To learn more about Ambri and their technology we encourage you to visit them at www.ambri.com

"The project remains ongoing and has greatly accelerated the iteration process for internal R&D. Lead times to test new ideas have been cut in half."