

# Leak-Free Integrity

### **Largest single-piece, tantalum-lined pressurized column gets stamp of approval**

Helium Leak Testing Inc., a provider of helium leak detection systems and services, recently certified the leak-free integrity of a 90-foot-long pressurized column measuring five feet in diameter for Titan Metal Fabricators in Camarillo, CA. The project, conducted at Titan's facility, involved what is considered the world's largest single-piece tantalum-lined carbon steel column.

When delivered to the customer's chemical plant, the column will contain hot acid under pressure. The requirement for its single-piece construction was necessitated in order to provide a continuous surface for the interior 0.020-in.-thick tantalum coating. The coating forms a liner that protects the steel of the column from the corrosive effects of the high concentration and hot HCL acid. When operational, the column is pressurized to 175 psi. Without this protective lining, the acid would eat away the steel and the column would fail, leaking the acid.

For this application, Helium Leak Testing pressurized the column with helium and conducted extensive "sniff" tests on the exterior to detect any leakage. The leak tests are part of the Titan quality assurance program to certify new products to the applicable requirements of ASME, PED, AD2000, Chinese SQL, and TEMA standards. Titan designs and manufactures heat exchangers, pressure vessels, and related products for the steel, pharmaceutical, and chemical industries. It specializes in products requiring acid-resistant materials such as titanium, zirconium, niobium, and tantalum. Its customers include GE, Dow Corning, Dow Chemical, Wooley, Parsons, and BP Chemical.

Selected because of its experience in leak detection of tanks and closed vessels, Helium Leak Testing had previously supplied leak detection and various other services to Titan. The company, headquartered in Northridge, CA, provides many vacuum system and mass spectrometer leak detector field services including leak testing for tank, piping systems, pipelines, and small electronic packages. More information is available from Helium Leak Testing at 818-349-5690 or [www.heliumleaktesting.com](http://www.heliumleaktesting.com).

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