

Vacuum Box Bubble Leak Weld Testing on Bolted Tanks

Vacuum Box testing is most commonly used to test for leaks in welds, but it can also be used for other applications. Similar to welded storage tanks, bolted tanks also require leak testing per API 650.



This configuration allows the area surrounding the bolted joint to be tested while maintaining the visibility and localized inspection benefits of Vacuum Box testing. Rather than requiring the bolts to be removed or working around each individual obstruction, the taller profile provides sufficient clearance for the hardware while allowing the gasket to seal against the tank surface. This makes Vacuum Box testing a practical option for checking leak-tightness around bolted tank seams and other areas where protruding hardware would prevent the use of a conventional flat Vacuum Box.

One immediate issue with using a standard flat Vacuum Box on bolted tanks is that the height of the bolts interferes with testing. To overcome this, we designed a unit with a taller profile so that the Vacuum Box can effectively encapsulate the bolts and create a successful vacuum.

