



Able Electropolishing Co.  
2001 S Kilbourn Ave  
Chicago IL 60623  
Phone: 773-277-1600

## #1002 - Brite Ultraclean

**Industry:** Semiconductor - Manufacturers of equipment which deposits its materials for semi-conductor processing

**Mfg/Method:** Weldment/Assembly

**Alloy:** 304 stainless steel

**Problem:** Our customer welds 304 stainless steel tubes to the 304 stainless steel body. The surfaces must be extremely clean because this equipment operates in a high vacuum. Due to the elevated temperature during welding the 304 stainless steel is subject to intergranular precipitation of carbides, which decrease the resistance to corrosion. The heat discoloration is an oxide, which will contaminate the vacuum chamber.



**Solution:** We electropolished the internal as well as the external surfaces. The assembly distills phosphorous to a volatile vapor, which is part of the growing crystal layer for semi-conductor film. Electropolishing provided a totally clean surface area that also rendered the assembly more resistant to the highly corrosive environment.