

Able Electropolishing Co. 2001 S Kilbourn Ave Chicago IL 60623

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## #1002 - Brite Ultraclean

**Industry:** Semiconductor - Manufacturers of equipment which deposits 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 inter-

granular 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.

