



Able Electropolishing Co., Inc.

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## #1073 Brite Ultracleaning/ Brite Passivation

**Industry:** Other - Manufacturers of Immersion Heaters

**Mfg/Method:** Tube forming

**Alloy:** 321 Stainless Steel

**Problem:** In a review of product quality, the customer was looking to extend the life of their immersion heater by removing contaminants from the surface of the tubes. Some of the contamination came from normal fabrication, with the balance as a by-product of the annealing operation. The complete part cannot be submerged in the electropolishing solution due to the fact that the element is inserted in the tubes prior to forming.



**Solution:** Electropolishing extends the life of the heater in two ways. By removing the surface layer of metal, imbedded and surface contaminants from fabrication and annealing are removed. Secondly, the surface is left chromium rich, which further protects the tube surfaces from corrosion caused by chemical and heat reactions with the stainless.

**Note to engineer:** *We design and build our own racks and have on many occasions partially electropolished finished assemblies. Our post-processing capabilities also allow for the assemblies to flow through our production lines without chemical or mechanical damage. As a result, we can be specified as a "last stop" for many assemblies prior to final packaging or assembly. If you have a critical assembly needing special surface treatment, contact our office for details.*