



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

## #1082 Corrosion Resistance/ Brite Ultraclean

**Industry:** Food/Beverage

**Mfg/Method:** Tube forming, annealing

**Alloy:** 321 stainless steel

**Problem:** This part is used in food service and comes in contact with food products. The customer was looking to improve appearance, cleanability and durability. The part is annealed and the heat from that process caused a black oxide to form on the surface. The part during use, is immersed in vegetable oil, and then cleaned using harsh chemicals.

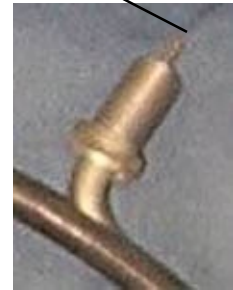
**Solution:** Electropolishing handled each area of importance equally. The process removes the outer layer of metal contaminated from annealing, producing an aesthetically pleasing appearance. The new finish was more corrosion resistant, because contaminated areas were removed. The surface was smoother, making the part easier to clean and leaving no areas where particles could cling.

**Note to Engineer:** A considerable side benefit of an electropolished surface is its resistance to adhesion of food, chemical or dry product. When the surface metal is removed, there are fewer pores and reduced microscopic peaks and valleys. As a result, there is less adhesion of oils, dry powders or food products, making cleaning of electropolished stainless faster and more productive. The application areas in the food, pharmaceutical and other areas are numerous.



*Before*

*Enlarged view of critical fitting that is masked during process.*



*After Electropolishing*