

## #1017 - Decorative and Brite Passivation

### INDUSTRY:

Medical/Dental - Manufacturer of orthopedic equipment

### MFG/METHOD:

Brazed assembly

### ALLOY:

304 and 302 stainless steel

### PROBLEM:

The "proximal arm tube" part is used in a wheelchair accessory. It is part of a component that simulates a shoulder-and-elbow joint, allowing paralyzed people to feed themselves. The client had been mechanically polishing the stainless steel to get a smooth, bright finish. The part, however, has three tubes brazed together with a wire form assembled into it, and the brazing leaves behind an uneven buildup of splatter and some heat discoloration. Achieving a bright, uniform finish with mechanical steel polishing is not only difficult, but also dangerous for the part—it could not reliably be handled on high-speed polishing wheels. The client turned to Able Electropolishing to find a way to reduce the polishing time and consistency for the product.



### SOLUTION:

After looking to electropolishing, the client contacted Able Electropolishing looking for a solution that would replace the costly, time-consuming and hazardous in-house operation being used. We treated several samples with electropolishing, using varying controlled material removals to demonstrate the consistent precision made possible only by this process. The samples shined brightly, and the brazing was cleaned from the part.

After electropolishing, our client implemented the samples into the wheelchair accessory and determined that our process saved time and improved the part's quality. Electropolishing cleaned and passivated each part in one consistent, safe and low-cost operation.

*Note to Engineer:* In some cases, the combination of mechanical finishing (belt polishing) and electropolishing produces surface finishes of a jewelry-like luster and smoothness. If your component or assembly requires a particularly high level of finish, please fall Able Electropolishing for details.