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## #1017 - Decorative and Brite Passivation

**Industry:** Medical/Dental - Manufacturers of orthopedic equipment

**Mfg/Method:** Brazed Assembly

**Alloy:** 304 and 302 stainless steel

**Problem:** The 'Proximal Arm Tube' is part of a wheelchair accessory. It is part of a component that simulates a shoulder and elbow joint to allow paralyzed people to feed themselves. Our customer had been mechanically polishing this part to get a smooth bright uniform finish. The 'Proximal Arm Tube' has three tubes brazed together with a wire form assembled into it. Brazing leaves behind an uneven buildup of splatter and some heat discoloration. Not only is it difficult to achieve a uniform and bright finish, but these parts can be dangerous to handle on high speed polishing wheels. Our customer had to find a way to reduce the time each assembly is polished.



**Solution:** Our customer looked into electropolishing as a method to replace the costly time consuming and hazardous in house operation. We electropolished several samples with varying controlled material removals. The electropolished samples were bright and the brazing cleaned up. Our customer received the electropolished samples and assembled them into the wheelchair accessory. By electropolishing the 'Proximal Arm Tube' our customer determined that they would save time and improve their quality. Electropolishing cleaned and passivated each part in one low cost operation.

**Note to engineer:** *In some cases, the combination of mechanical finishing (belt polishing) and electropolishing together produce surface finishes of a luster and smoothness that is near "jewelry" in appearance. If your component or assembly requires an unusually high level finish, please call for details.*