



Able Electropolishing Co.  
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## #1021 Brite Passivation

**Industry:** Other - Manufacturers of breathing apparatus equipment

**Mfg/Method:** Stamping/Heat treated - Hook Latch

**Alloy:** 17-7 Precipitation-hardening stainless steel

**Problem:** Our customer makes a compact breathing oxygen tank, which attaches to a belt around the waist of mining personnel. The Hook/Latch is part of the carrying case. In case of a lack of oxygen the mine personnel can use the compact oxygen tank. The Hook/Latch is made of 17-7 Precipitated-hardened stainless steel stamping which has a high tensile strength. They are heat-treated and discoloration is produced on the surface. The heat treat discoloration is an oxide and will accelerate corrosion.

**Solution:** Our customer needed the maximum corrosion protection for this critical application. Passivation could not remove the heat treat discoloration. Our customer chose Able Electropolishing. Electropolishing removed a controlled amount of material. The surface was left free of oxides, scale and discoloration. The Hook/Latch is bright and passive after electropolishing.

**Note to engineer:** *The electropolishing process uncovers the true base metal, and does not leave a coating that may chip or peel. Although stainless steels are most commonly electropolished, there are literally hundreds of alloys that respond well to the process.*

*Before*

*Note - Varying amounts of heat discoloration*



*After*

