



Able Electropolishing Co.
2001 S Kilbourn Ave
Chicago IL 60623
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#1036 Brite Deburring/Corrosion Resistance

Industry: Appliance/consumer - Manufacturers of kitchen utensils and cutlery

Mfg/Method: Formed, heat treated and ground

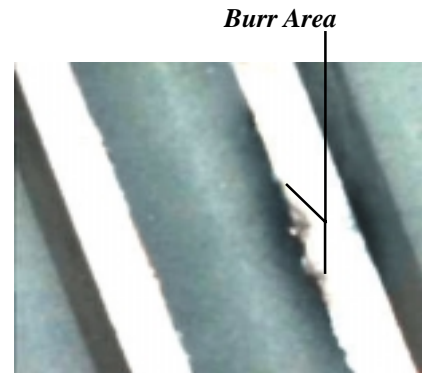
Alloy: 410 Stainless Steel

Problem: This component is part of a consumer assembly. The 410 alloy and fabrication processes were specified to match the application - a cutting utensil. Grinding operation left feather burrs along the entire length of the part. (see higher magnification photo). The customer needed to deburr the cutting edge on the blade while enhancing the appearance. As a side benefit, the customer was looking to provide additional corrosion resistance.

Solution: Electropolishing removed flaking burrs, cleaning up the edge and after removing the top surface of material, increased the corrosion resistance in one metal removing operation.

Note to engineer: *Electropolishing is a precise process when applied correctly. In this case, exact metal removal will actually sharpen a cutting surface as the microscopic feather edge is removed. However, if too much metal is removed, the edge begins to break and dull.*

Since electropolishing is not a mechanical process, it works equally well on hardened and soft or annealed materials. In this case and others, plugging electropolishing in as the final operation, leaves the component ready for final assembly.



High Magnification Before



High Magnification After