



Able Electropolishing Co., Inc.

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Chicago IL 60623

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#1075 Brite Microfinishing/ Endurance Finishing

Industry: Other - Manufactures of springs

Alloy: Rectangular Music Wire (Steel)

Problem: This part is used as part of a cylindrical lock assembly. The spring was failing prematurely due to fissures and cracks produced from the stresses involved in winding process. The part failed to meet cycle life requirements specified by the customer.



Solution: Electropolishing eliminated the stress points in the wire. After removing .0005 to .001 material, the parts exceeded the cycle life requirement. Raw springs reached 147,000 cycles. Electropolished springs reached 800,000 cycles. As surface metal was dissolved, so was the heat tint caused by the heat treat operation.

Note to engineer: *Electropolishing has long been specified on high stress or high cycle springs and stampings to prolong part function. Numerous articles have been published on the subject, and tests have been performed on parts receiving both shot peening and electropolishing. If you have a metal part failure in a high cycle application, please contact our technical staff for further guidance.*