



**Able Electropolishing Co.**

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## #1003 - Micro Deburring/Brite Ultraclean

**Industry:** Manufacturer of high quality transformers.

**Mfg/Method:** Stamping

**Alloy:** Copper (.020" sheet)



*Photo Cropped*

**Problem:** Our customer receives the nine-inch long lead frames with a burr from the stamping die-break as well as sharp corners. The copper is .020" thick and very fragile plus the design is complex. They have been chemically etching the lead frame to remove the burrs from the 'Winding Elements' on the lead frames. They pressure laminate the 'Winding Elements' and found that a burr was still cutting through on the die break side of the part after the chemical etch process. They were confronted with a rising scrap rate.

**Solution:** We electropolished several as stamped, nine inch long lead frames with various controlled material removals. The electropolished lead frames were sent to the customer. The electropolished 'Winding Elements' from the lead frames were pressure laminated and then they were assembled and tested. The final operation included lead forming, electrical testing and isolation voltage testing. The end result concluded that electropolishing left the parts with a Brite Ultracleaned finish and completely removed the die break as well as rounding the sharp corners. Micro deburring by electropolishing performed well on thin, .020" material without distorting this important part. They also reduced their scrap rate with electropolishing. A stamped lead frame; as long as twelve inches, with many parts attached is a very economical way to get the benefits of electropolishing.