

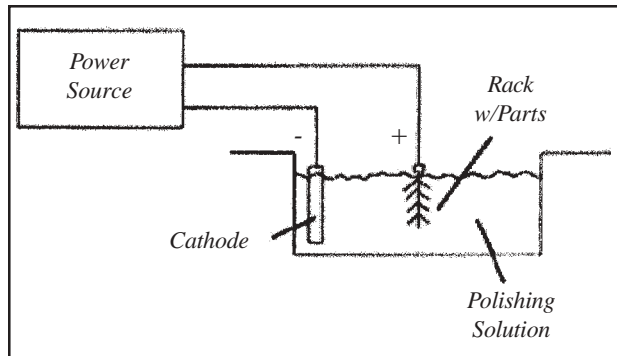
New Ideas to Polish up Your Profits

By David Z. Pokvitis, Co-owner, Able Electropolishing Co., Inc.

In the fast-paced fastener industry, some things don't change. Customers are always looking for improved finishes, better performance, and value. Electropolishing is a process that is worth a close look to set your company apart from the pack.

Electropolishing is a metal finishing process similar in theory to electroplating. Parts are immersed in a chemical bath and electrical current is applied to the parts. While electroplating deposits metal on fasteners, electropolishing carefully dissolves surface metal. Electropolished fasteners look plated, but the similarities end there.

Electropolished surfaces reveal the true base metal and as a result, there are no coatings to chip or peel. This is especially important in threaded areas and in applications where contamination from foreign coatings is a problem.



A simple electropolishing setup

While electropolishing has been available commercially since the early 1950s, most in the fastener industry still have not grasped the advantages of this controlled metal removal process. When done properly, electropolished fasteners are brighter, smoother, more corrosion-resistant and better resist galling in one cost effective operation. While nearly any metal fastener can benefit from this proven process, it is the stainless fastener that seems to benefit most. Best of all, hydrogen embrittlement (a problem with plated fasteners) is normally not a problem with electropolishing.

As the surface metal is dissolved, surface cracks, imbedded impurities and small burrs are removed from the entire part. The process has been nearly perfected

by a handful of companies, and surface metal removal can be controlled to ± 0.0001 ", protecting valuable threads, journals and other critical dimensions. Being a non-mechanical process, the more fragile or complex the part is, the more economical electropolishing can be. Part damage, especially to threads, is rare in the hands of an expert.



Beyond the bright, chrome-like finish, many find corrosion resistance to be a great benefit of electropolishing. If you are acquainted with passivation to improve

corrosion resistance, then think of electropolishing as the gold standard for stainless and related alloys. Electropolishing is a named and approved process under ASTM-A967, which sets passivation standards for many industries.

Literally hundreds of salt-spray tests have been performed on a huge range of stainless alloy fasteners with performance measured in hundreds and even thousands of hours under ASTM-B117. An electropolished fastener is free of sub-surface contamination and also free of surface irregularities. These



Scale and discoloration are removed without thread damage.



Above parts after 1560 hrs. of salt spray. Electropolished part is on the right. Electropolishing beats passivation in nearly any benchmark test.

two improvements allow metals to resist corrosion longer, and retain their bright finish. Do you have customers looking for a brighter, more corrosion resistant fastener?

So electropolishing is great for brightening and cleaning fasteners. How else does this process add value for your customers? In recent years, Able Electropolishing Co. of Chicago has developed a proprietary bulk electropolishing method that can reduce finishing costs by 90%. The bulk process has wider tolerance requirements, but has been a big hit with many volume users. This has allowed electropolishing to be competitive with other more common finishing techniques.

No finishing solution is complete without considering vendor service. The dedicated electro-polisher you choose needs to be not only aware of, but completely tooled for the fast-paced distributor. What good is an order if it is one day late? Look for a supplier with 24-hour plant operations to move orders fast. Make sure your supplier has a huge inventory of tooling so an order can move without de-

lay. Require your electropolishing vendor to be ISO 9001:2000 certified, as it is a strong indicator of their dedication to quality. A good supplier has systems in place to drop-ship, package and break orders to your needs to minimize extra handling. And above all, make

certain your electropolisher has the staff and technical support to help you shine in front of your important customer.

Smart distributors around the country are adding electro-polishing to their line card as a way to boost sales and profits. A world-class electropolisher can be your partner to new



A well-trained support staff is essential to your success.

business opportunities.

For further information, contact Able Electropolishing Co., Inc., 2001 S. Kilbourn Ave., Chicago, IL 60623; phone 773-277-1600; or visit their website at www.ableelectropolishing.com. 