

Technology For Chrome Plating

USA Comeback

American manufacturing is making a comeback because companies are facing problems with overseas production in China, India, Mexico and other countries. This stems from material shortages, production delays, un-trained workers, product quality issues, raising wages, increased transportation costs and unfavorable exchange rates.

So far, Caterpillar, Ford, GE, NCR and SCI are returning some or all of their production here and this trend is expected to increase. The new buzzword in corporate America is OnShoring and this is great news for the economy and the hard chrome industry!

Hard chrome has a bright future, regardless of what the environmentalists do. No other process offers the same properties at such a low cost and high value-added factor.

Chrome shops that recognize the importance of maximizing their quality and efficiency will thrive. The others will gradually lose market share and eventually close. Profitability of those that progress will increase considerably simply because more work will be done by fewer shops.

The best investment you can make is in your own business. And the best time to get started is now, before others realize the mistake they made by delaying.

Two improvements that have the greatest impact are:

- **Using the most efficient process.**
- **Controlling bath impurities.**

(details inside)

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High Efficiency Chemistry

The old 100:1 standard bath has been around for almost 100 years now. This used sulfate as the only catalyst and it served its purpose back then. Later, the self-regulating and fluoride baths became prominent some 50 years ago. These improved plating speeds, deposit hardness and crack structures, but had the drawback of etching which ruined some parts and caused the impurities to build-up faster.

Finally, the etch-free High Efficiency bath was introduced about 20 years ago. At first these baths had problems with deposit peeling and poor anode performance, but these difficulties were solved a long time ago.

Then five years ago Plating Resources, Inc. developed a major improvement to the high efficiency process. First we made it available as a separate catalyst system so it could be used with generic chromic acid. Then, we designed it so the chemical costs were considerably lower.

But the best improvement is the bath's incredible tolerance to impurities. We noticed this in the laboratory and later verified it in the field where an unusable bath was rejuvenated simply by adding the Dura catalyst system. This bath had over 12 grams/liter of iron and copper and was shut-down because it couldn't plate good parts.

The bath plated more like a new solution after adding the Dura Catalyst.

This saved the cost of dumping and remaking the bath. Every shop has to deal with bath impurities and the best way is using a process that's more tolerant of them. This also avoids having to increase the chromic acid level which eventually reaches the point of no return.

Bring your plating solutions up to 21st century technology by adding the Dura catalyst. Besides increased impurity tolerance you will also gain:

- **Faster plating speeds (by 50%!) over the 100:1 bath.**
- **Brighter, harder and smoother Cr deposits with less pitting.**
- **A significant cost savings over other high-efficiency processes.**

The icing on the cake is less rework, better quality and happier customers. But the crowning achievement is lower chemical & electrical costs. This leads directly to a much higher work efficiency and more profitability.

Try the Dura Catalyst. If it doesn't work, and you end up having to remake the tank anyway, we will replace the catalyst for free. You can't lose - You win either way!

The Dura catalyst is available both as a separate additive

and

Pre-blended with liquid chromic acid in 330 gallon totes.

Controlling Impurities

Many shops don't realize just how costly high levels of impurities (trivalent, iron & copper) can be. These are very expensive in terms of slower plating speeds, higher rework rates, lower quality and reduced profits. Impurities are a fact of life; you just need a better way to deal with them. Here's some suggestions:

- Change to a bath that has a greater tolerance to impurities.
- Establish the optimum impurity range for that bath.
- Initially lower the impurities to within that range.
- Purify the bath, as needed, to maintain that range.

Several practical and inexpensive methods are available that increase the impurity removal efficiency. None of these involve the purchase of any equipment. Just call us and we can show you how to get started.

But what about an old bath that's so far gone there's no point in trying to save it? The best option is to remake it with an inexpensive low concentration 20 oz. bath. There's no need to start at 30 or 35 ounces of chrome with this technology, and its level can always be raised later if that's ever needed.

National Hard Chrome Society

Do you ever feel the plating & metal finishing societies don't represent the hard chrome industry very well? A lot of shops are questioning their continued membership as the economic downturn combined with the lack of a society's support seems to be setting-up the Perfect Storm for hard chromers.

Those with insight think we should form a non-profit society that's strictly focused on our needs. This would be limited to only USA hard chrome platers and a few select suppliers. Some of its goals might include:

- **Improving the technology available to its members.**
- **Providing round-table discussions and technical presentations.**
- **Easing the regulatory burden placed on hard chrome.**
- **Developing quality standards other countries can't match.**
- **Expanding our market and promoting hard chrome.**
- **Lowering our costs by making bulk purchases available.**
- **Analyzing costs and establishing selling price standards.**
- **Improving the profitability of our members.**

There's strength in numbers and some feel we must band together, as a unified body, for the benefit of all in our unique industry; we must help ourselves because no one else will.

Please contact us if you agree and see the value in forming the National Hard Chrome Society.

www.Plating.com

Free Technical Assistance & No Cost Conversion Analysis

These are available as a courtesy to our valued customers. Let our 50 years of technical expertise solve your plating problems. This can include quality issues, analysis & bath control, impurities, stop-off, anoding, fixturing, equipment issues, environmental, maintenance, etc.

And, we provide a free technology website to all our customers. This vast library covers every aspect of both the art and the science of successfully applying hard chrome. This includes data on plating difficult parts, how to reduce costs, impurity control, reverse etch times, chrome stripping, anoding, fixturing, stop-off, equipment, troubleshooting, worker safety, and the environment. Refer to it often because it will be a valuable resource for your company.

Turn over for information on the USA's comeback.

FANTASTIC FINISHES



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