

# Plating NEWS

2010 Highlights

## Plating NEWS, Fall 2010

Advanced Plating Technologies received interesting replies to the question posed about the evolution-of-man statement on our website. The common thread in these replies points to the looming extinction of plating as we know it. If improved plating technologies are readily available but not adopted by man then plating evolves too slowly, if it evolves at all. Seems reasonable to us but how do man and plating go about **evolving**?

### TODAY'S ECONOMY

Think about it in the light of the economics of today. How long will hard chrome platers be able to continue overplating and then machining? It's not at all unusual for an airline/aerospace/engine-parts plater to deposit 15 to 20 mils somewhere on a part to achieve 5 mils minimum. The excess is removed in the machine shop. Factoring in the inherent plating inefficiency with the extra plate time, the power consumed and the necessity to "treat" excesses? You're on the road to extinction!

### UNSUSPECTED ENEMIES LURKING IN MANUFACTURING

At times there can be unseen impediments to progress and there are real enemies of change. Some years ago we witnessed a large manufacturer's labor union block a plating department's efforts to increase productivity. Some young manufacturing engineers had ingeniously redesigned plating fixtures not only to accommodate more parts on a rack but also increase the number of racks/hour produced. The labor union workers would have none of it. Long story short, the plant closed and all the manufacturing is now done offshore and by a completely different company. To be fair, plating alone was not the cause of this plant closure. An out-dated manufacturing mentality was present and had permeated most other manufacturing departments as well.

### OUT-DATED MANUFACTURING MENTALITY

This out-dated manufacturing mentality has largely been the root cause of stagnation in our progress toward more efficient plating. What is an out-dated manufacturing mentality? One example would be when a manufacturing worker is presented a change and he or she says "**but we've always done it this way**".

The auto parts manufacturing industry, thought at one time to be on the cutting edge of plating technology, is not exempt from the stagnation. We recall a teleconference in which several plating department personnel were sitting around a conference room viewing presentation slides and discussing the huge potential for simulation models to help improve a grossly inefficient plating operation. We knew there was some opposition to change. Management had initially taken to beating up their suppliers for lower material costs. As we all know this only goes so far and it was not nearly successful here. Real plating problems still existed.

### THE KISS OF DEATH

In spite of numerous different electrolytic process examples discussed and prominently displayed during the aforementioned teleconference there was a curious and definitely audible comment from the back of the room. It went something like "*Well, (long pause) has this simulation technology been used to plate.....*"?

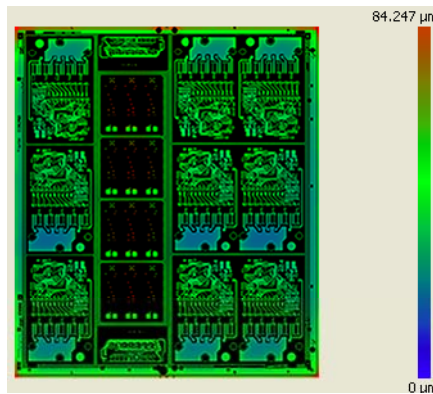
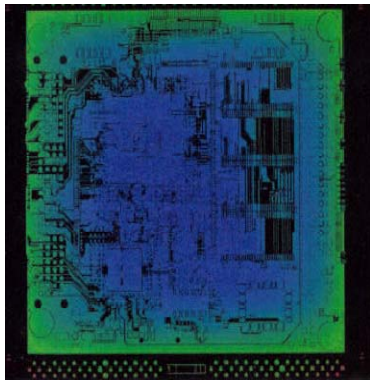
We won't name the part(s) being plated. The parts were not the issue. It didn't matter and besides, mention of it here in this Newsletter might embarrass the manufacturer. Suffice to say, the question was the **kiss of death** for plating improvement in this particular manufacturing facility. This last little bit of resistance came from an engineer who had no idea what was really being proposed and probably had been dragged into a presentation he didn't want to attend. This plant closed too but in this example plating improvement could very well have saved them. **Why do these things happen?**

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## THE COSTS OF INACTION

We've charted, mostly for our office amusement, the fortunes of a large North American plater/processor that has been looking at plating improvement (using computer simulations) since early 2000. They've spent so much time and money looking, talking, proposing and testing that they could have acquired the available software years ago and be several \$ millions ahead. Yes, several \$ millions. We calculate they continue to over plate \$672K/year in measurable time and materials.

We once challenged another large plater, "Look, we'll *GIVE* you the latest in computer simulation plating software and train your people to use and benefit from it. You must agree however to share 25% of your plated metal savings the first year of operation." We didn't even discuss or ask for any quality improvement compensation, scrap reduction rebates, etc. They would not take us up on it. Go figure!



*It shouldn't be such a big challenge to plate flat cathode devices, as shown on the left. Or should it?*

*The current state of plating in many pwb production facilities is to deposit copper at less than 10 ASF. Couple this with extra thick dry films for plating and other thick masks that can follow and we call this downright inefficient.*

*Next Newsletter we will dispel some long standing myths about plating circuit boards.*

## THE COSTS OF ACTION

One of the definite costs of action will be to get going forward in some way. Plating computer simulation is not the end-all, be-all of plating improvement. Lots of progress can be made with simple changes, now. The prospect of any change represents a huge cost to some. The physical changes can be formidable but it's the mental challenge that's often the bigger, hidden cost. How to get people on board with manufacturing changes must be one of a manufacturing manager's bigger challenges. The journey starts with but a single step.

## THANKS FOR READING

This edition of Plating NEWS has been written and edited by Roger Mouton and Staff at EIMC – Advanced Plating Technologies. We welcome submissions for publication in future issues of Plating NEWS.

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