Copper Plating Troubleshooting

Problem	Cause	Remedy
No deposit	No current (or gassing from part)	Check all electrics
Pitted Plate and Orange Peel effect	Impurities in solution	Plate a dummy for 30 mins. If no improvement, filter solution through activated charcoal placed into a coffee filter, then replace the Brighteners
Rough Plate	1. Amps too high 2. suspended particles in solution 3. pH too high or low	1. Reduce current 2. 2. Filter solution through a coffee filter (No charcoal) 3. Dump solution and make a new batch Check anode bags are not torn etc.
Dark deposits (esp. on low spots)	Zinc, lead etc. in solution	Plate a dummy for 30 minutes.
'Burnt' Plate	Too much current	Reduce current, check solution temperature and reduce if needed.
Cloudy deposits on the plate	1. Poor cleaning/rinsing 2. Organic contamination 3. High temperature 4. Low agitation	1. Improve cleaning/rinsing 2. Filter solution through activated charcoal placed into a coffee filter, then replace the Brighteners 3. Adjust temperature 4. Improve air agitation
Dull plate	1. Too much amperage 2. Part not buffed enough 3. Brighteners Exhausted	1. Reduce amperage 2. Buff and re polish 3. Add Copper Brightener B
Plate Peels or Blisters off	1. Current too great 2. Surface too hot when buffed 3. Poor surface preparation 4. Plated onto steel	1. Reduce amperage 2. Reduce pressure on Buffing wheel 3. Improve technique 4. Prime steel with nickel before copper plating
Plate peels or blisters off when applied to nickel base	1. Nickel has oxidized 2. Insufficient cleaning 3. Too much power whilst plating	1. Prior to plating swab nickel base with battery acid, then rinse. 2. Reappraise cleaning methods – use Soft Scrub etc 3. Reduce amperage. 4. Reverse the current for 60 seconds to ‘etch’ the surface of the part.