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E-Brite 700 SB Troubleshooting Guide:

FEGNNIGALDATA

| Problem | Cause | Solution |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cloudy deposits (MCD/HCD) | Low <i>SB-B</i> Low pH High make-up additive Organic contamination Metallic contamination Low agitation | Add <i>SB-B</i> in 0.05% increments (0.5 mL/L) Adjust pH Reduce make-up concentration + carbon filter Carbon treatment Raise pH + carbon treatment Increase agitation |
| Cloudy Deposit (LCD Areas) | Low <i>SB-B</i> Low pH | Add <i>SB-B</i> in 0.05% increments (0.5mL/L) Adjust pH |
| Dull Deposits (LCD Area) | Metallic contamination | "Dummy" solution at 4-5 ASF |
| Too Bright | High <i>SB-B</i> Low make-up | Withhold <i>SB-B</i> adds Add make-up |
| Poor Leveling | Low <i>SB-B</i> Low pH Low agitation | Add <i>SB-B</i> in 0.05% increments (0.5 mL/L) Adjust pH Increase agitation rate |
| Poor Ductility | High <i>SB-B</i> Low make-up High pH Metallic Contamination Organic Contamination | Withhold <i>SB-B</i> adds Add make-up Adjust pH "Dummy" solution at 4-5 ASF Carbon treatment |
| Burning | Low nickel salts/boric acid High CD Low temperature Low agitation Chromate contamination | Add nickel salts/boric acid Reduce CD Adjust temperature Increase agitation High C/D "dummy" + high pH treatment |
| Skip Plating | High <i>SB-B</i> Metallic contamination Low make-up | "Dummy" solution at 4-5 ASF or withhold <i>SB-B</i> adds "Dummy" solution at 4-5 ASF (e.g., Zn, Cd, Pb) Add make-up |

| Make-Up | High drag-out Excessive carbon usage On filter used | Use reclaim tank Reduce amount of carbon | |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--|
| High consumption <i>SB-B</i> | High drag-out Excessive carbon usage Very high nickel conc. Low anode area (polarized anodes) Organic contamination | Use reclaim tank Reduce amount of carbon used Dilute solution Increase anode area Carbon treatment | |
| Poor Corrosion Performance | | | |
| | Pits present in semi-bright and/or bright nickel Particulate matter present Microporous porous Chromium layer not Functioning (if used) | Add E-Wet 701WAIR or carbon treat Filter solution Inspect microporous nickel and/or carbon treat each solution | |
| Peeling of Bright Nickel layer from semi-bright Nickel layer | | | |
| | Drying of semi bright nickel During part transfer Pickup of films during exit From semi bright nickel | If consistent, insert rinse operation between semi bright and bright nickel solutions See above and/or carbon treat each solution | |
| | Or entrance to bright nickel | | |
| Trailing edges only | Parts are dipolar exiting From semi bright nickel System | Install live current exit from semi bright nickel (use approx 10% of normal rack current) | |
| Leading edges only | Parts are bipolar entering Bright nickel solution | Reduce current density at these points, consider removal of some anode material | |
| Bottom of Part/ Rack only | Too much current density Exit from semi bright nickel | Reduce current density (consider removal of some anode material) | |
| Pattern after bright nickel | Drying of semi bright nickel Solution during part transfer | If consistent, insert Rinse operation between semi bright and bright nickel solutions | |
| Pattern after bright nickel | Drying of foam from semi Bright nickel solution | Carbon treat solution to reduce foaming or reduce air agitation to minimize foam | |