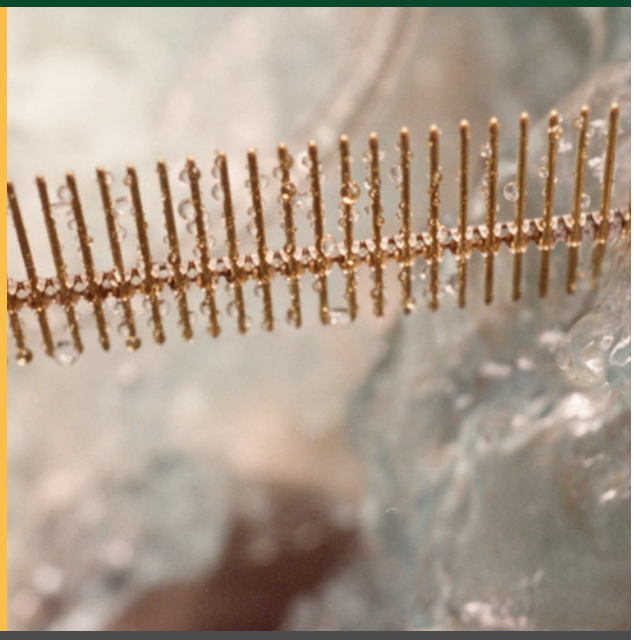
PRECIOUS PLATE



Specification Efficiency Scorecard

INDUSTRY SOLUTIONS

A Diagnostic Tool for Technical Optimization

STEP ONE: IDENTIFY WASTE

GOLD ZONE COVERAGE

1

Are you plating the whole part just because it was easier to highlight the entire CAD model? Physics only requires gold where the actual "mating" occurs.

- ☐ **RED FLAG** Does the drawing say "Plate All Over"?
- ☐ **RED FLAG** Is the stripe continuous, even in the scrap space between parts?
- ☐ **RED FLAG** Is gold covering the solder tail or crimp area?

PHYSICS AND LAYERING

2

Engineering "safety factors" in gold thickness often act as "cost factors" that do not improve cycle life or corrosion resistance..

- ☐ **RED FLAG** Thickness callouts of 50µin (1.27µm) or higher, which are often relics of outdated engineering standards.
- ☐ **RED FLAG** Absence of a nickel underplate specification.
- ☐ **RED FLAG** Specifying a "Minimum" thickness without a "Maximum" cap, which allows platers to over-plate and pass the cost to the buyer

PROCESSING SPEED

3

Overly tight tolerances serve as a bottleneck, forcing plating lines to run at sub-optimal speeds and increasing unit costs.

- ☐ **RED FLAG** Plating location tolerances tighter than +/- 0.007".
- ☐ **RED FLAG** Plating thickness tolerances that are tighter than industry standards (e.g., a narrow 30-35µin range).
- ☐ **RED FLAG** Demanding a "Zero" transition zone (bleed), which contradicts the physical realities of the plating process.

SCRAP MANAGEMENT

4

The carrier strip is a functional necessity for manufacturing but becomes scrap after production. Plating this scrap is a direct financial loss.

- ☐ **RED FLAG** Gold plating present on the carrier strip.
- ☐ **RED FLAG** Carrier strips wider than 0.250".
- ☐ **RED FLAG** Pilot hole placements that interfere with standard masking belts.

STEP TWO: TRIM COSTS, & MAKE SMARTER INVESTMENTS

GOLD ZONE COVERAGE

1

THE SOLUTION
Implement Selective Spot Plating. By defining a "Critical Contact Zone"—the actual mating surface—manufacturers can use custom masking wheels to deposit gold only on necessary spots (e.g., a 2mm area), leaving the remainder of the terminal bare or tin-plated.

PHYSICS AND LAYERING

2

THE SOLUTION
Optimize the Stack-Up. Utilizing a high-quality Sulfamate Nickel Barrier (50-100µin) is more effective at stopping copper diffusion than increasing gold thickness. Improving the nickel layer allows the gold specification to be reduced from 50µin to 30µin or even 15µin with no loss in performance.

PROCESSING SPEED

3

THE SOLUTION
Design for High-Speed Reel-to-Reel. Relaxing tolerances on non-mating features allows production lines to accelerate from 20 feet per minute to 40 feet per minute, significantly lowering processing costs.

SCRAP MANAGEMENT

4

THE SOLUTION
Single Source Integration. Redesigning stamping layouts allows the carrier to act as a natural mask or enables masking tooling to cover it. The fundamental rule is to "never plate the scrap."

STEP THREE: RISK ASSESSMENT AND FINANCIAL IMPACT

CHECKMARKS IDENTIFIED	CLASSIFICATION	ESTIMATED OVER-SPEND
0	Fully Optimized	0% (Rarely Achieved)
1-3	Moderate Efficiecy	10 - 15%
4+	Legacy Bloat	30 - 50%

CONCLUSION AND STRATEGIC RECOMMENDATION

Specifications that have not been updated to reflect modern plating capabilities are likely resulting in significant capital loss. The documentation suggests that any project scoring 4 or more checkmarks on the audit should not be re-quoted “as is.”

The recommended path forward is a Engineering Reliability Audit. This process involves a technical review to identify exactly where specifications can be relaxed and where precious metals can be removed. This strategic adjustment ensures that the product meets performance requirements while achieving its true price potential through optimized material usage and increased manufacturing throughput.

We Engineer Reliability Through Chemistry and Process Integration.

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