Pd Ni

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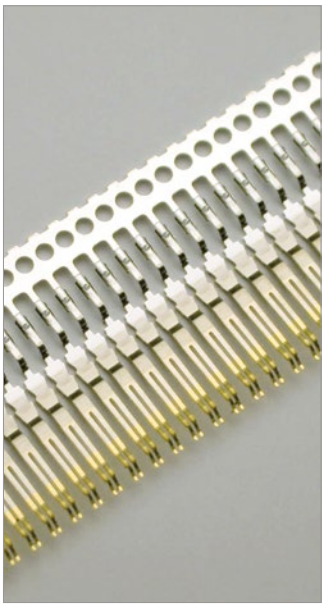
umicore

PALLUNA® ACF-100

PALLADIUM-NICKEL ELECTROLYTE



High-Speed Deposition for Reel-to-reel Plating

The new palladium nickel electrolyte PALLUNA® ACF-100 has all the technical advantages of other electrolytes - but without the smell of ammonia. The deposited layers are ductile, crack-free and resistant to abrasion. Furthermore, PALLUNA® ACF-100 has the cost benefit on its side: With comparable contact properties to those of hard gold, the palladium-nickel layer is by far the less expensive alternative.

PALLUNA® ACF-100 is a high-speed electrolyte, free of ammonia and chloride, for depositing a bright palladium-nickel-alloy in reel-to-reel lines (selective dipping, jet plating, brush plating) and in tabplaters.

Depending on the operation conditions, the electrolyte deposits alloy coatings with approx. 80 % of Pd. The alloy composition is largely independent of the current density. Electrolyte maintenance without ammonia and chloride. Breakdown products could be removed by carbon treatment easily. Continuous carbon treatment is feasible.

A brightener specially developed for PALLUNA® ACF-100 enables analytical electrolyte control. Thus, the increased requirements for new quality standards and stricter guidelines such as IATF 16949 can also be mapped by a compliant process control.

Advantages

- Free from ammonia and chloride
- No smell nuisance by ammonia gas
- Reduced corrosion of equipment
- Long lifetime of anodes
- Ductile coatings
- Constant alloy composition
- reliable analysis and electrolyte control

Applications

- Electrical contacts for Connector Industry
- Hardgold replacement

PALLUNA® ACF-100

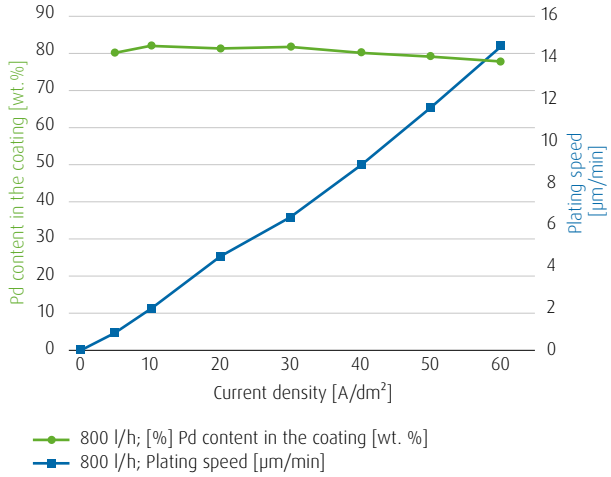
PALLADIUM-NICKEL ELECTROLYTE

TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Free from ammonia and chloride
Metal content	15 g/l Pd, 16 g/l Ni
pH value	5.5 at 60 °C
Operating temperature	60 °C
Current density range	Up to 70 A/dm²
Plating speed	Up to 15 µm/min
Anode material	MMO (type PLATINODE® 187 SO)

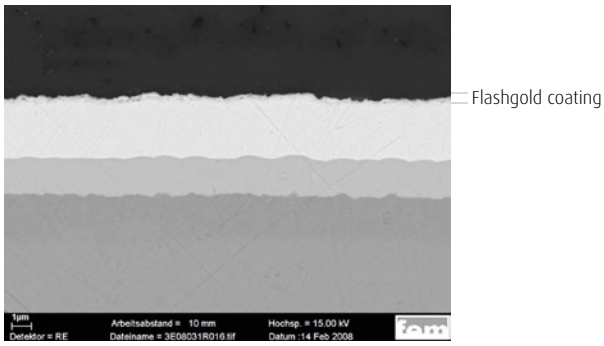
Coating characteristics	
Coating	Palladium-Nickel
Alloy composition	80 wt.% Pd 20 wt.% Ni
Colour of deposit	White
Brightness	Bright
Hardness of deposit HV 0.015 (Vickers) approx. values	500 - 550 HV
Max. coating thickness	10 µm
Density	10.8 g/cm³
Elongation	Approx. 5 %
Bendability (10 mm mandrel)	2 µm crack-free

Deposition Speed, Alloy Composition vs. Current Density



PALLUNA® ACF-100
JetLab4: 15 g/l, 16 g/l Ni; pH 5.5; 60°C; 1.11 g/cm³; 800 l/h

Crack- and Void-Free Coating



YOUR CONTACT

Do you have a specific question or would you like a no-obligation quote calculation?
Our specialist will be happy to help you with any technical questions you might have.

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