

Umicore Galvanotechnik GmbH

RHODUNA® TD

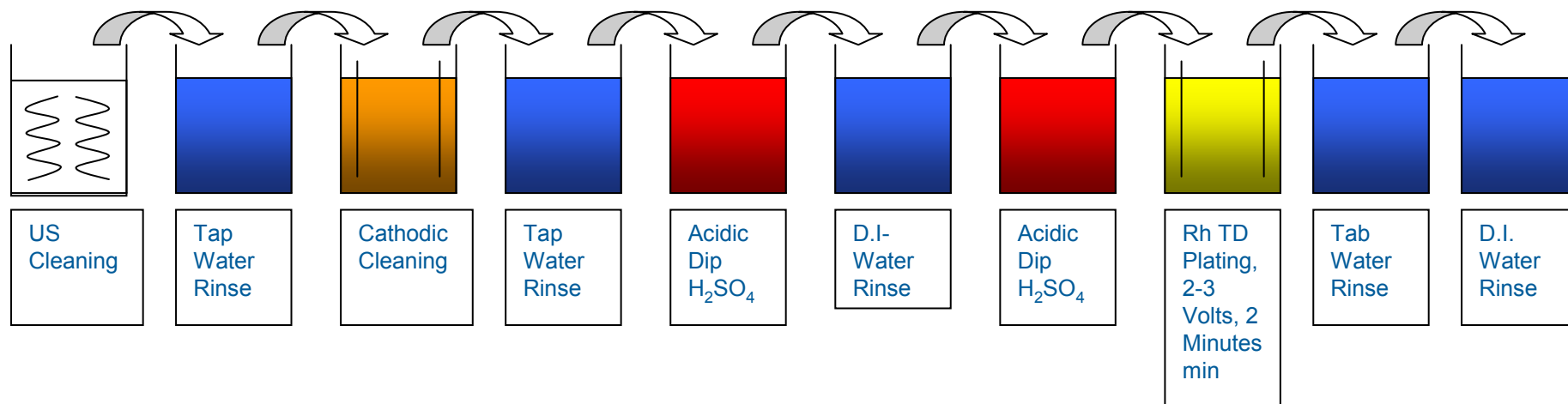
RHODUNA[®] TD

RHODUNA [®] TD	Precious metal content in the deposit wt. %	pH Value	Temperature °C	Current density A/dm ²	Max. coating thickness µm	Plating speed µm/min	Anode Material	Agitation of bath / parts required	Hardness of deposit HV 0,025 approx.	Colour of coating
Brilliant white rhodium for decorative and technical applications. Ultra bright coatings with previously unattained lightness. High deposition capacity. good covering speed, excellent throwing power. Suitable for rack and barrel applications.	99,9	<1	40 (25 – 60)	1 (0,5 – 60)	0,5	0,06	Pt/Ti	Yes	800 – 900	brilliant white

RHODUNA[®] TD - Batch type vs. Replenishment

- Batch type:
 - Make up, use up, dump it
 - Advantage: easy use, no analysis or replenishment required, low enrichment of impurities
 - Disadvantage: loss of rhodium, when dumped
 - Good for max. 20 ltr
- Replenishment:
 - Bath is made up and replenished according to the ampere hours or analysis
 - Good for baths of min 20 ltr
 - Advantage: less rhodium losses
 - Disadvantage: enrichment of impurities

Rhodium Plating - Process Steps



Rhodium Plating - Impurities

- Cu: 20 mg / ltr
 - Ag: < 10 mg /ltr
 - Zn: 20
 - Cyanide: < 10 mg
 - Fe: 1000 mg /ltr
 - Ni: 1000 mg/ltr
- All impurities are causing less bright, or even dark coatings
 - It is very difficult to remove the impurities.

RHODUNA[®] TD - The L-Value



L=0,
absolutely
black

L=100
absolutely
white

The L-Value is defining the whiteness. 0 is absolutely black. No light is getting reflected. 100 is absolutely white. All light is reflected.

RHODUNA® - L-Values of white metals

RHODUNA® TD	RHODUNA® J2	RHODUNA® J1	Platin K	Palladium 456	Miralloy 843
90	89,5	89,5	84	82,6	85,2

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