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CL BRIGHT SILVER ST

High bright silver process

1. General information

The CL Bright Silver ST process deposits high bright, white silver coatings regardless which deposit thickness is used. The brightener system is build on organic additives. The process is therefore also suitable for silver plating of electronic's—as well as electrical components.

2. Characteristics

colour of deposit	white
purity	99,9%
hardness	90 – 110 HV 0,1
density of the deposit	10,5 g/cm ³
weight at 1 micron	105 mg/dm ²

3. Equipment

3.1 Tank

Tanks should be made from PVC, PP, PTFE or high pressure polyethylene with an external amplification.

3.2. Anodes

Only fine silver anodes of high purity should be used. The anodes resp. anode boxes should be covered. As material we recommend PP. The anode/cathode ratio should be 1,5 : 1.

3.3. Heating/Cooling

The electrolyte temperature should be kept on 18 – 30°C. Heat exchangers made of porcelain can be applied. By a necessary cooling are cooling coils made of Teflon, stainless steel or titanium be applied.

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Geschäftsführer : Uwe Lüttke

3.4 Filtration

The electrolyte should be filtered continuously by PP filter candles. Prior to the use of the filter candles, they should be treated for several hours in a 2% KOH solution followed by a thorough rinse.

3.5 Movement of the electrolyte

A mechanical movement is necessary to ensure an impeccable metal deposition. This prevents the formation of pores.

3.6 Rectifier

A rectifier with sufficient efficiency, residual ripple under 3%, should be used. An ampere minute meter is recommended.

3.7 Exhaust

An air exhaust system is necessary for cyanide containing electrolytes.

4. Working conditions

	Limits	Optimum
silver content	35 – 45 g/l	40 g/l
potassium cyanide (free)	120-140 g/l	130 g/l
potassium hydroxide	5,0-8,0 g/l	6,0 g/l
pH value	minimum 12,5	
cathodic current density		
rack	0,8 – 2,0 A/dm ²	
barrel	0,3 – 0,7 A/dm ²	
CL-Bright silver Part G	10-20 ml/l	
CL-Bright silver Part ST	20 ml/l	

4.1 Potassium carbonate

The content of potassium carbonate should be determined from time to time. Contents up to 100 g/l are not critical. Higher contents can have a negative influence on the metal distribution. The electrolyte has to be diluted by concentrations over 150 g/l.

5. Consumption per 1000 Ah

0,3 – 0,5 l CL Silver Brightener Part G

0,5 – 0,8 l CL Silver Brightener Part ST

6. Safety Indication

The necessary precautions measures should be adhered to in handling the chemicals.

Chemicals without a hazard indication should not be seen as harmless. Also when the handling of chemicals are not due to hazard identification, we recommend to handle with care and avoid for example skin contact.

7. Warranty

Seller makes not warranty, whether of merchantability, fitness or otherwise, expressed or implied, concerning the product other than it shall be of the specification stated herein.

Any recommendations made by Seller concerning the use of the product are believed to be reliable, but seller makes no warranty of the results obtained. Buyer agrees to inspect the product supplied hereunder immediately after delivery. Failure to give notice in writing as aforesaid within the specified time constitutes and unqualified acceptance of the product and a waiver of all claims with respect thereto.

06/2005/Ri

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