



PT. SINAR CEMARAMAS ABADI

- VERCOPPER (ACID / CYANIDE COPPER)
- VERNICKEL
- VERCHROME
- VERZINC ACID / CYANIDE ZINC
- CLEANER (ELEKTRO / SOAK)
- PHOSPHATING
- CHROMATING
- ELECTROLESS NICKEL

FOR HIGHTECT ELECTROPLATING :

- ELECTROLESS NICKEL PLATING FOR ALUMINIUM AND ZINC DIE CAST, MAGNESIUM
- GOLD PLATING
- PTFE FORELECTROLESS NICKEL
- HARDCHROM
- SAND CAST ALUMINIUM ALLOYS PLATING
- MAGOXID – COAT FOR PROTECTING MAGNESIUM SUBSTRATES

- KEPLA – COATING FOR ALUMINIUM AND TITANIUM ALLOYS
- ELECTROLESS NICKEL PLATING WITH INTEGRATED SILICON CARBIDE PARTICLES (SIC)
- GLISS – COAT
- A CLEAN SOLID FILM LUBRICATION FOR A MAINTENANCE FREE PERMANENT LUBRICATION OF ALL KIND OF FRICTION PAIRINGS
- SEPA – COAT (ANTI ADHESIVE COATING AND ACTIVATOR) FOR THE REMOVAL OF PART FROM MOULDS

HR 2013

BRIGHT CYANIDE ZINC PROCESS

1. DESCRIPTION

This process is suitable for both rack and barrel plating which formulated to provide a brilliant, ductile and uniform Zinc deposits through a wide range of current density. It is very easy to operate and control the process, which make an excellent throwing power as well as high quality layer for chromate passivation.

Feature :

- Single additive for barrel and rack plating
- Suitable for low cyanide to high cyanide zinc electrolyte
- Low consumption
- Excellent chromate passivation acceptance

2. SOLUTION MAKE-UP

For making a new cyanide zinc electrolyte, it is depend on what type of electrolyte you are going to use (low / medium / high cyanide). But as a sample of medium solution you can use this formulation :

Zinc Cyanide	40	g/L
Sodium Cyanide	60	g/L
Caustic soda	70 – 80	g/L
Zinc Purifier	3 – 4	ml/L
HR 2013 Brightener	2 – 3	ml/L

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3. OPERATION CONDITION :

	Barel	Rack
Current density	0.5 – 2 A/dm ²	2 – 5 A/dm ²
Voltage	10 – 15 Volt	2 – 5 Volt
Temp	20 – 40 oC	20 – 40 oC
Agitation	Anode / Cathode Area	Cathode movement

Please pay attention that the required current density and voltage is depends on electrolyte type and electrolyte composition, as well as the brightener consumption will increase due to increasing the electrolyte temp

Using High purity Zinc (special high grade 99.99) is absolutely recommended for having trouble free plating.

Anode / cathode area should be adjusted through desired Zinc content and maintain proper ration, as well as this possible to use steel anode in the same time with Zinc anode to keep the zinc content by changing the ratio of Zinc anode to steel anode in high temp workingsolution (specially in summer time)

The color of the anode film can be used as a rough guide for anode are which is needed (if you are sure using the right current density) very dark film on zinc znode decrease anode area no film, bright zinc increase anode area.

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4. MAINTENANCE :

Solution composition should be maintain by weekly analysis, according to electrolyte type

	Low Cyanide Type	Medium Cyanide Type	Hight cyanide type
Zn	6 – 15 gr/L	15 – 25 gr/L	30 – 40 gr/L
Total CN	8 – 25 gr/L	30 – 70 gr/L	80 -140 gr/L
NaOH	60 – 80 gr/L	60 – 80 gr/L	70 – 90 gr/L
NaCN / ZN Ratio	1.5/1	2 – 2.7	2.5 – 3.5

Brightener consumption : 0.5 – 1.5 / 10 KAH which is depend on the bath condition as well as the bath temp, please pay attention that the brightener consumption will be slightly higher in the barrel process. The brightener consumption is depends on drag out - bath temp – current density – impurity

Metallic impurity : for heavy metal impurity (like lead) it is recommended to add poly sulfur or sodium sulfur to let them precipitate, but in case of other metallic contamination like copper contamination shuld add zinc dust or using dummy plating.

5. Safety Precaution :

HR 2013 additives and plating solution are poisonous. Necessary safety precaution should be adhered at all times.

6. WASTE WATER

All waste water must be treated as law requires before being admitted to the public canalization

This working instructions are based on laboratory values and practical experiences. we have however no influence on the precise and conscientious use of our products.

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