



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 2015

ALKALINE NON CYANIDE PLATING PROCESS

1. DESCRIPTION

This is an environment friendly Alkaline Zinc Plating process with outstanding advantages of eliminate the of poisonous cyanide and ductile bright Zinc deposit over wide range of current density which is suitable for rack and barrel operation

2. SOLUTION MAKE – UP

Zinc oxide	10	g/L	
Sodium hydroxide	120	g/L	
Sodium carbonate	20	g/L	
HR 2015 Carrier	10	ml/L	
HR 2015 Brightener	1	ml/L	
HR 2015 Conditioner	10	ml/L	
HR 2015 Purifier	1 – 4	ml/L	(purifier, if it is necessary and depends on impurity)

3. OPERATING PARAMETERS

Temperature	
Current density	2 Amp/dm (rack) / 1 Amp/dm (barrel)
Voltage	5 Volt / 11 Volt
Filtration	continuous filtration is recommended (2 tank turn over per hour with 10 micron cartridge)
Agitation	air agitation (regular and slow) / mechanical agitation

Head Office :

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For success operation barrel, temperature control is essential. There fore build up higher volume of working bath (0.4 Amp/L) is recommended replenishment :

HR 2015 Carrier	1 – 2	L/ 10 KAH
HR 2015 Brightener	0.5 – 1	L/ 10 KAH
HR 2015 Purifier	0.25 – 0.5	L/ 10 KAH

Analysis Zn and Caustic Soda and add the required amount to keep them in range

4. OERATING AND MAINTENANCE OF BATH

The zinc metal content is readily replenished from the zinc anodes (purity 99.99 %) and is maintained if anode area and Sodium Hydroxide contents are maintained properly. High metal content can build-up due to :

- To high Sodium Hydroxide level
- To high Zinc anode area

5. STEEL SHEET

It is always preferable to use only zinc anode (zinc balls in mild steel basket), it is also possible to install a separate zinc dissolution tank (zinc generator) function of the bath constituents :

density and high Zinc metal content will reduce low current density performance. Lower concentration of caustic soda will affect coverage in low current density areas and high concentration of caustic soda will increase excessive gassing.

Reviewing the total anode area and if it required, some zinc anodes should be replaced by mild steel sheet. If the increase of zinc content is desired, Zinc anode should be dissolved by immersing zinc anode in operating solution .

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Additives :

HR 2015 Carrier as a base brightener, that controls metal distribution and prevent burning at high current density areas as well as control blister formation. It is reduces internal stress. Lower concentration will affect thickness distribution and also result burning high current density areas / higher concentration will not affect in rack operation, but if it will be in very high concentration will reduce brightness and deposit rack

HR 2015 Brightener as a brightener, boots brightness when the concentration of solution A and solution C are maintained at their optimum level, it is always recommended to use brightener per its desired dosage, because overdosing make layer passivation

HR 2015 Condisioner as a conditioner, responsible for softening the hardness of the water used in process, it helps to reduce the ill effect due to usage of raw material with metallic hardness

HR 2015 Purifier as purifier, remove metallic contaminants which get carried in the solution in the production process, or even through low quality raw material

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