TECHNICAL DATA SHEET

SATIN NICKEL PROCESS

Satin Nickel process has been developed to produce non- glaring silky, stain-free, attractive, Satin Nickel deposits. The new “Satin Nickel” process is simpler to operate and does not employ expensive equipments.

SALIENT FEATURES:

- It is recommended for use in plating of jewellery, spectecal frames, pen plating etc.
- **Cathode movement is used instead of air agitation.**
- This system has excellent gold and chrome receptivity.
- The process is suitable for plating of rack articles only.
- No filtration during actual plating since the Additive STN, which produces non-glaring effect of the deposit, will be removed partially by filtration.
- Decomposed products have to be removed after idling of bath and also after continuous 16 hours of the working of the bath by filtration with Carbon pack.
- Before starting of the plating operation , it is necessary to make up the concentration of additive, which is removed by filtration.
- When immersing the articles into the Satin Nickel bath, care is to be taken that the current less exponation time may not exceed 10 seconds. High current less exponation time leads to bad adhesion.

MAKE UP :

Satin Nickel Salt	520-550 g/l
Satin Nickel Additive 145	15-20 cc/l
Satin Nickel Additive 146	6-10 cc/l
Satin Nickel Additive STN	0.4-0.8 cc/l

NOTE :

Satin **Additive STN** should be diluted 10-15 times with water before making addition to the tank.

OPERATING CONDITIONS :

	OPTIMUM	RANGE
Cathode current density	6.0 A/dm^2	4.0-8.0 A/dm^2
Anode current density	2.0 A/dm^2	1.0-3.0 A/dm^2
Temperature	53^{o}C	50-60^{o}C
pH	4.2	4.0-4.3
Density	33^o Be.	32-35^{o}Be
Agitation	-------	Cathode movement
Filtration	-------	No filtration during working of the bath

MAINTENANCE :

Nickel Metal	106 g/l	100-110 g/l
Chloride as Nickel Chloride	50 g/l	40-60 g/l
Boric Acid	40 g/l	35-45 g/l

As high quality salts are very necessary to maintain the bath conditions to obtain the optimum results. pH value should adjusted by adding 10 % A.R. Sulphuric acid or chemically are Nickel carbonate.

Satin Nickel additives 145 & 146 are primary brighteners and are required to be added at regular intervals. Satin Nickel Additive STN is satinizing agent.

Satin Nickel Additive 145	----	100-150 cc/1000 amp. Hr.
Satin Nickel Additive 146	----	100-200 cc/1000 amp. Hr
Satin Nickel Additive STN	----	150-200 cc/1000 amp. Hr.

Excess addition of Additive STN leads to poor adhesion of the deposit to basis metal.

IT IS IMPORTANT NOT TO ADD ANY OTHER ADDITIVES , BRIGHTENERS AND WETTING AGENTS in this since it is very sensitive to some Organic compounds and it will be extremely difficult to rectify the bath which contains such undesirable elements.

In – organic and organic impurities can be removed by dummy, high pH and activated carbon treatment are same as in the case of normal bright nickel baths.

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