SR Post Dip

SR Post Dip is a highly alkaline, nitrite-based post-dip for the Laser FE chemical polishing system. The SR Post Dip bath is used mainly to remove any smut present on steel parts after processing in the Laser FE bath. The SR Post Dip will also help prevent flash rusting.

Features & Benefits

Concentrate liquid	Less inventory required
Long bath life	Less down time Higher productivity
Leaves a passive film	Less re-work
Easily waste treated	Lower total process cost

Physical Data

Specific gravity at 25°C	1.29
Solubility in water	Complete
pH at 25° C	14.0
Appearance	Clear, off-white liquid
Odor	Sight

Typical Applications

- Used as a post dip after bright dipping of steel to remove dissolved iron and prevent oxidation.

Operating Conditions

Overview of a Typical Laser FE Process Cycle

1. Cleaner
2. Rinse
3. Laser FE
4. Rinse
5. SR Post Dip
6. Rinse

	Optimum	Range
Make-up	70% by volume water	
	30% by volume Sr Post-Dip	20-50%
Replenishment	*Replenish with the SR Post-Dip concentrate as determined by analysis*	
Temperature	150°F	145 – 160°F
Dwell Time	5 minutes	2-10 minutes
Agitation	Part agitation necessary	

Equipment

Tanks	Steel, PVD, polypropylene, polyethylene
Heaters	Steel
Cooling Coils	Steel
Fixtures, Racks, Baskets	Stainless steel, most plastics
Ventilation	Required

Processing

Effectiveness of the SR Post Dip increases with immersion time, concentration and temperature.

Step	Bath	Make-Up	Time (min)	Temp (°F)
1	Clean parts			
2	Rinse		1 – 2	Cold Water
3	Laser Fe, chemical polish	30% (vol)	1 – 5	Room Temperature
4	Rinse		1 – 2	Cold Water
5	Rinse		1 – 2	Cold Water
6	SR Post Dip	30% (vol)	2 – 10	150
7	Rinse		1 – 2	Cold Water
8	Dry or continue wet processing			

*On certain steel alloys, no SR Post Dip is required. Your HH technical representative can advise.
Rinse steps can be counter flowed.

Titration Method

Chemicals required:

0.5N Hydrochloric Acid
Phenolphthalein indicator

Equipment required:

250 Erlenmeyer flasks
10 mL pipet
25- or 50-mL burette

Procedure

1. Obtain a sample of the working bath and cool to room temperature.
2. Pipet a 10 mL sample of the cooled bath into an Erlenmeyer flask.
3. Add approx. 50 mL of DI water and several drops of Phenolphthalein indicator to the flask.
4. Titrate with 0.5N Hydrochloric Acid to a colorless endpoint.
5. Record mL of titrant used.

Calculation

Concentration = mL 0.5 N HCl x 2.27

Replenishment of the SR Post Dip

Replenish the bath as needed to maintain good smut removal.

Waste Disposal

Spent SR Post Dip solutions can be treated with other waste streams, but best results are found when it can be segregated and batch-treated independently. Best results can be obtained by very slowly adding excess ferric chloride to the spent solution. Then, if necessary, adjust the pH to local regulations with acidic material. Consult local, state, and federal regulations regarding waste disposal first.

Hubbard-Hall Inc. offers Aquapure products, a complete line of wastewater treatment chemicals for industry. Please contact your sales representative for details.

Caution

SR Post Dip contains sodium hydroxide and sodium nitrite and is a strongly alkaline oxidizing bath. Protect against any contact with skin or eyes. Read and understand the SDS on this product for full personal safety precautions. Avoid any introduction of acids into this bath.

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