R•G-138 Trivalent chromium blue white passivator

version	**date**	**creation**	**approval**

Content

1 Introduction

Introduction	1.1 R•G-138 corrosion resistance is 2-3 times higher than the traditional hexavalent. chromium yellow passivation. 1.2 It is suitable for zinc cyanide, cyanide free zinc plating and chloride zinc coating. Excellent corrosion resistance can produce bright protective film. It has excellent heat resistance and can withstand for one hour at 120 ℃. 1.3 5% white rust salt spray resistance time of can reach 96 hours.

2 Features

Features	2.1 There is no hexavalent chromium and phosphorus, which can reduce the cost of. wastewater treatment. 2.2 Uniform bright blue white film layer, low reject rate and high production efficiency. 2.3 The coating has good corrosion resistance and prolongs the service life of. electroplated parts 2.4 Using the current equipment and process, there is no extra cost and the conversion is convenient.

3 Equipment

Equipment	3.1 Plating tank: polyethylene, polypropylene or PVC lining. 3.2 Stirring: the plating solution must be stirred or moved. PVC or polypropylene mixing pipe must be used.

4 Preparation

Preparation	4.1 Inject 3 / 4 volume of deionized water into the plating tank. 4.2 Add an appropriate amount of RG-138 trivalent chromium blue and white passivator and stir well. 4.3 Add water to make up the water level. 4.4 Add nitric acid to adjust pH value to 1.6-2.2

5 Operation

Operation	Condition	Range	Optium
	R•G-138 passivator	50-100ml/L	80ml/L
	PH	1.6-2.2	2.0
	Immersion time	25-70s	45s
	drying temperature	60-80℃	80℃
	Temperature	20-30℃	

6 Pre/after treatment

Pre/after treatment	6.1 It is recommended to rinse immediately after plating and activate with 5-20ml / L nitric acid。 6.2 The passivated parts must be washed against the current and dried with warm air. 6.3 The corrosion resistance of passivated parts can be further improved by using R. RG-666 as protective layer.

7 Maintain

Maintain	7.1 The passivator was added regularly, and the pH of the bath was adjusted with diluted nitric acid. The maintenance schedule is established by analyzing and controlling the added quantity. 7.2 After working for 100dm2, replenish according to the surface area and add 10-15ml / L passivator, and the addition amount depends on the loss.

8 Technological process

Technological process	8.1 Zinc plating 8.2 Ion water washing 8.3 0.5-2％ nitric acid activation 8.4 Deionized water washing 8.5 R•G-138 passivation 8.6 Deionized water washing 8.7 Drying 60-100℃

9 Analysis	
solution	9.1 0.1NSodium thiosulfate solution 9.2 10％ Potassium iodide solution 9.3 0.5％Starch indicator 9.4 concentrated sulfuric acid 9.5 Ammonium persulfate
instrument	A 50 ml burette Two 250 ml conical flasks One 100 ml measuring cylinder A 25ml straw
procedure	9.1 draw 5ml plating solution into 250ml conical flask with pipette, and add 100ml. distilled water or pure water. 9.2 adjust the pH value to about 10 (the color changes to green, 10% sodium hydroxide, 10-15ml). 9.3 add 1.0-1.5ml hydrogen peroxide. 9.4 boiling the solution for 30-45min, the volume of the direct solution is reduced to 1 /. 3, so it is important to evaporate the excess hydrogen peroxide. 9.5 dilute the cooled solution with 100 ml pure water. 9.6 acidify with about 15 ml of concentrated hydrochloric acid, the color changes from yellow to orange, and the solution may become hot and cold again. 9.7 add 4-5ml 10% potassium iodide solution (dark red), add starch. 9.8 titrate with 0.1N sodium thiosulfate solution until colorless.
Calculation method	R•G-138(ml/L)= V×N×13.89/0.1 V = Titration of sodium thiosulfate solution (ml) N = Sodium thiosulfate solution constant

10 wastewater treatment	
Wastewater treatment	RG-138 trivalent chromium blue white passivator contains trivalent chromium compounds, which can be released by adjusting pH to 9.0 with lime.

11 Notice

Notice	The concentrated solution of R G-138 trivalent chromium blue white passivator and its operating solution are acidic and should be handled with care. Nitric acid can cause serious burns to the skin and eyes. Wear protective clothing, safety eyes and face mask when using. In case of contact with skin, wash the contact area with plenty of clean cold water.

12 Trouble shooting

Trouble	Cause	Treatment
Yellowing chromating	Coating thick	Increase concentration and immersion time
	Much iron	Electrolysis or treatment with zinc
Light red to yellow	Coating thin	Increase concentration
Light red to blue	Coating thin	Increase concentration
Light green to blue	Coating thick	Shorten immersion time
Corrosion resistance	much iron	Control iron or dilute solution
	Parameter is wrong	Check parameter
mist	PH high	Lower PH、analyze zinc
zinc	10g/L	
iron	＜100ppm	