

# Process Validation done after complaint

Sr. No	Critical Process	Parameters	Before	After	Observation	Controls	Results
01	Degreasing	Concentration Temperature Lot size	65 – 70 gpl 60-80 deg 30 kg per lot	65 – 70 gpl 60-80 deg 30 kg per lot	74 gpl 72 Deg 30 kg per lot	Analysis Te. Controller Weighing Scale	Ok Ok Ok
02	Anodic cleaning	Concentration Temperature Lot size	50 – 80 gpl 60-80 deg 30 kg per lot	50 – 80 gpl 60-80 deg 30 kg per lot	68 gpl 72 Deg 30 kg per lot	Analysis Te. Controller Weighing Scale	Ok Ok Ok
03	Acid Pickling	Concentration Temperature Lot size	30 – 50 % Room temp 30 kg per lot	30 – 50 % Room temp 30 kg per lot	50 % Room temp. 30 kg per lot	Volume / Volume Manual Weighing Scale	Ok Ok Ok
04	Zinc Plating	Zinc Conc. Caustic Conc. Temperature Current Time Lot Size	10-15 gpl 120-160 gpl 20-35 deg 7-8 v / 300-350 amp 75 mint 45-50 kg	10-15 gpl 120-160 gpl 20-35 deg 8-9 v/400-450 amp 75 mint 30 kg	14.25 gpl 148 gpl 28 deg 8.9 v / 430 amp 75 mint ( PLC Set ) 30 kg	Analysis Analysis Temp.controller Rectifier display & Records Weighing Scale	Ok Ok OK Ok Ok Ok
05	Passivation	Concentration	100 ml / ltr	100 ml /ltr	100 ml/ liter	Analysis	Ok
06	Topcoat	Concentration	100 ml / ltr	100 ml /ltr	100 ml /ltr	Analysis	Ok
07	Drying	Temperature	60-80 deg	60-80 deg	72 deg	Temp.controller	Ok
08	Thickness	Min-8 micron	Min 8 micron on DFT	Min 8 micron on XRF tester	12.2 to 14.6 on XRF tester		OK