

Automation Cleaning Process Control Plan

Operation No. Flow	Process Description	Chemical Used	Make-up Water / Chemical	Time (min)	Bath Change Frequency	Filteration size / Frequency Changes	Conveyor Speed	Process Control / Parameters	Spec. Limits	Special Character	Analysis Frequency	Who	Analysis / Equipment	Trigger Point	Alert Level	Contingent Action
Start																
1	Incoming Inspection	-	-	-	-	-	-	Travel Ticket Incoming Inspection Record	AQL 0.65%	☺	Every lot	IQC	Visual Inspection Delivery Order	When rejected	1	Inform customers' QA Department / return to customer
2	Mat'l Input	-	-	-	-	-	50 Hz	Quantity Load	-		-	Production	-	-	-	-
	Degreasing	-	According to chemical's specification	(2 ± 0.5) min	Once / Day	10 µm X 7pcs (weekly) Maintenance for nozzle (weekly)		Automation Cleaning Record: Temperature pH Conductivity reading	According to chemical's specification	☺	Twice / Day	Production	Thermometer pH paper TDS meter	When rejected	2	Adjust set temperature Replenish or change bath Replenish or change bath
	Rinsing (x2)	Dionized water	-	(5 ± 0.5) min	Once / Day	5 µm X 7pcs (weekly) 5 µm X 7pcs (weekly) Maintenance for nozzle (weekly)		Automation Cleaning Record: Temperature pH Conductivity reading	According to chemical's specification		Twice / Day	Production	Thermometer pH paper TDS meter	When rejected	2	Adjust set temperature Replenish or change bath Replenish or change bath
	Oven Drying	-	-	(4 ± 0.5) min	-	-		Temperature	80 ± 5 °C	☺	Twice / Day	Production	Control Panel Temperature	Temperature > 85 °C	2	Adjust set temperature
	Material Output	-	-	-	-	-		Part Inspection Report	-		-	-	-	-	-	-
End																

***Note:**

1. All chemical used are RoHS Compliance

2. ☺ - Critical Process

Alert Level

1. Inform QE

2. Inform Production Supervisor

Powder Coating Process Control Plan

Operation No. Flow	Process Description	Time (min)	Process Control / Parameters	Spec. Limits	Special Character	Analysis Frequency	Who	Analysis / Equipment	Trigger Point	Alert Level	Contingent Action
Start	From Cleaning Process										
3	Jigging	-	Follow customer requirement (if necessary)	-		Every jig	Production	100% checking for every jig	Incomplete material and incomplete part for jigging	Production supervisor	Conduct 200% inspection
4	Coating	Follow parts requirement	Coating thickness	Follow customer requirement	☺	-	IPQC	Control Panel Gun	When rejected	QE	Adjust gun setting
	Oven Curing	Follow powder requirement	Temperature Glossiness	Follow powder specification	☺	-	Production	Control Panel Temperature	When rejected	QE	Adjust temperature setting
5	Unjigging	-	Follow customer requirement (if necessary) Design on request	-		-	Production	Thickness gauge Gloss meter Colorimeter Solvent rub test Cross hatch test	Tests failed	QE	First piece confirmation
6	Visual inspection for parts' appearance	-	Refer limit samples from customer (reviewed & signed by customer)	Follow customer visual acceptance criteria		100% inspection for all produced parts	QC	Operator conduct 100% visual inspection	Visual inspection follows defect catalogue and limit sample from customer	Production supervisor and QE	Segregate rejected parts and inform customer's QA Dept Review limit sample and defect catalogue once a year
7	Packing Storage / Delivery	-	Packing label and shipment label Packing standard Powder coating outgoing report	AQL 0.65%		Every lot	OQC	Visual inspection	When rejected	Production supervisor	Sorting
End											

***Note:**

1. All chemical used are RoHS Compliance

2. ☺ - Critical Process

Alert Level

1. Inform QE

2. Inform Production Supervisor