



Wet Process Audit Check Sheet CED Coating (Epoxy)

Doc .No.:FT/PUR-SQA /14

Rev. No : 05

Date.:07-05-2021

Supplier Information

Supplier Name:-	Metalman Auto	Certification:- ISO 9001:2015	Consent to Operate: Available	Date:- 30/01/2024
Location:-	B-12, MIDC Waluj, Aurangabad	Certificate No.:- C635176-CC1	Consent No.:- 2111000880	Assessed By:-
Contact Person:-	1) Mr. Arun Thorat 2) Mr. R.S. Gaikwad	Expiration:- 10-12-2026	Expiration:- 30-09-2026	1. Mr. Sudhanshu Dharmadhikari
Phone Number:-	8600019609	Register:- DNV	Register:- MPCB	2. Mr. Sumeet Haldekar
				3. Mr. Pankaj Rathi

Type of Surface Treatment Process

Alkaline Zinc Plating	___NA___	Powder Coating Ferrous	___NA___	Hard Chrome PI	NA_	Other	___NA___
Ni-Cr Plating	___NA___	Powder Coating Non-Ferrous	___NA___	CED Coating	Yes		
Anodizing	NA_____	Phosphating	___NA___	Painting	NA_		

Product Details

Dust cover

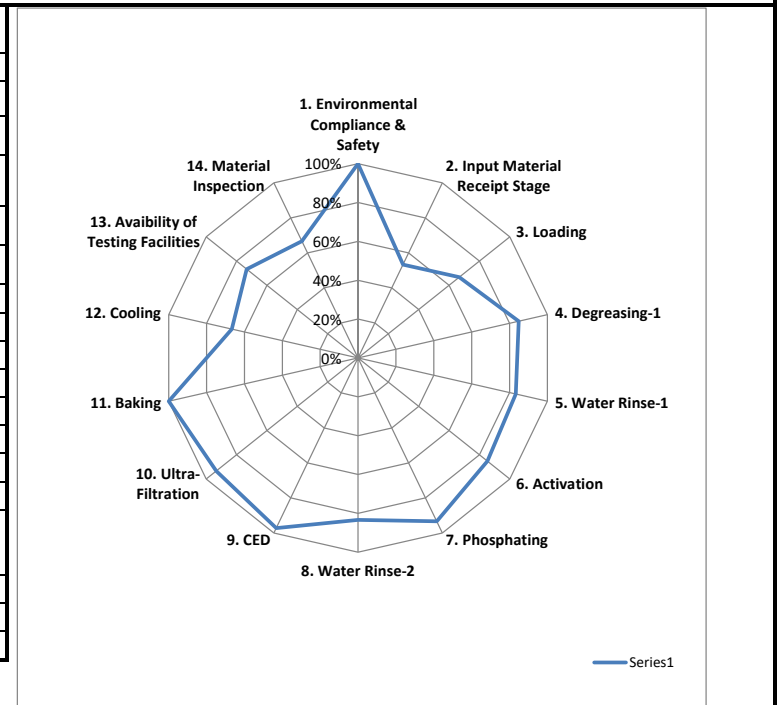
Other Customers

BMW, HD, BAL

Scorings Guideline for the Auditors			Criteria	Wtg.	% Score Achieved	Marks Achieved
Sr No	Score	Remark	1. Environmental Compliance & Safety	15	100%	15.0
			2. Input Material Receipt Stage	5	53%	2.7
1	3	System is in place (Complying)	3. Loading	5	67%	3.3
2	2	System is in place but needs improvement	4. Degreasing-1	5	85%	4.2
3	1	System is in place but not evidenced	5. Water Rinse-1	3	83%	2.5
4	0	No Compliance	6. Activation	6	85%	5.1
			7. Phosphating	5	93%	4.7
			8. Water Rinse-2	3	83%	2.5
			9. CED	10	97%	9.7
			10. Ultra-Filtration	5	93%	4.7
			11. Baking	5	100%	5.0
			12. Cooling	3	67%	2.0
			13. Availability of Testing Facilities	10	73%	7.3
			14. Material Inspection	5	67%	3.3
			15. Packing and Storage of Finished Products	5	33%	1.7
			16. Other Requirements	5	87%	4.3
			17. Process Change Management	5	100%	5.0
				100	83%	83.1

Note:-
 1. Supplier shall need to submit action plan for the points where score is mentioned as 0 & 1
 2. Points marked with * are critical requirements where supplier must score Min.2 marks
 3. Points marked with # are must compliance requirements where supplier can score either 3 or 0 marks
 4. All process parameters should be verified (Specified Vs Actual) as per valid control plan

Audit Score	75 ~ 100	Approved
	60 ~ 74.9	Approved with Conditions





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Sr No	Check Points	Requirements	Wt.	Mark	Observations/Evidences
A	Less Than 60	Rejected			
1 Environmental Compliance & Safety					
				Score	Observations/Evidences
1.1	MPCB certificate / consent to operate	certificate of pollution control board	15%	3	Available, No-2111000880 , Validity- 30/09/2026
1.2	ETP, Agreement with CETP & Environ Power for Sludge Disposal			3	Available, MEPL membership no- 33001224, validity- 02/09/2028
1.3	STP			3	Available
1.4	Legal Compliances as per factory Act.			3	Available
1.5	Are required PPE'S (Personal Protective Equipments) are provided?			3	PPE's are provided.
1.6	Do supplier have provision of fire extinguishers, emergency exists etc.?			3	FE- 10 Nos available.
Score				100%	
2 Input Material Receipt Stage					
				Score	Observations/Evidences
2.1	Proper storage & Identification	Material must be stored under controlled atmosphere.	5%	2	storage space is available with identification but need to improve 5S of the area.
2.2	Chemical Storage, Inventory norms & issue system	Defined storage for chemicals with MSDS, check for inventory management & chemical issue for line		2	Chemical storage is available with MSDS displayed.
2.3	Chemical supplier	Check for ETL approved chemical source is being used		2	Henkel
* 2.4	Chemical shelflife / Expiry Control mechanism & FIFO	Defined shelf life monitoring with FIFO system		1	FIFO is followed but FIFO SOP is not available.
2.5	Inward Inspection	There should be 100% inspection for Rust. No rusty material should go for Powder coating		1	Inward inspection station is not available.
Score				53%	
3 Loading					
				Score	Observations/Evidences
3.1	Jigs for all components		5%	2	Jigs are available for loading. B\jig validation completed
3.2	SOP for loading with Weight/Area Calculation Chart			2	Loading matrix available but also need to be prepared for dust cover etc.
3.3	Weighing machine			2	Available
3.4	Rework SOP for Rusty part			2	Rework SOP available.
Score				67%	
4 Degreasing-1					
				Score	Observations/Evidences
4.1	Chemical Name	Display of chemical name and process specification near tank	5%	2	Bonderite C-AK 4045 is used. Display need to be changed
4.2	Method	Dip Type / spray		3	Dip type
		Parts should not touch to each other		3	Parts do not touch each other
4.3	Pointage	after every 3 or 4 hours		3	Spec- 50-60 ml, actual- 56 ml
4.5	Timer with controller	Buzzer		3	Auto PLC controlled
4.6	Temp.(Controller for High & Low Range)	start of the shift		3	Spec- 45-50 deg c, actual- 49.3 deg c
4.7	Air Agitation to be provided to degreasing chemical.			2	Not available but solution continuously circulated through pump.



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4.8	Oil content checking	monthly		3	Checking done in-house
4.9	Bath Discard Schedule			3	Once/ quarter
4.10	Provision of Oil skimmer in the tank.			3	Oil skimmer available
4.11	Minimum solution level marking			0	Not available
Score				85%	
5	Water Rinse 1				Observations/Evidences
5.1	Method	Dip Type / spray	3%	3	Dip type
		Cascade System (Rinse within inlet and outlet connection)		3	Cascade system available
5.2	PH	after every 3 or 4 hours		1	Concentration is being checked in place of pH
5.3	Air agitation			2	Not available but solution continuously circulated through pump.
5.4	Continuous flow			3	Available
5.5	Bath discard Schedule.			3	Once/ week
Score				83%	
6	Activation			Score	Observations/Evidences
6.1	Chemical	Display of chemical name and process specification near tank	6%	2	Fixodine 50 chemical is used. Display need to be changed
6.2	Method	Dip Type / spray		3	Dip type
6.3	Pointage / Concentration / Total Alkali	after every 3 or 4 hours		3	Spec- 2-10 ml, actual- 3.8 ml
6.4	PH	after every 3 or 4 hours		3	Spec- 8-10, actual- 8.67
6.5	Timer with controller	Buzzer		3	Auto PLC controlled
6.6	Temperature controller and indicator			3	At room temperature
6.7	Bath discard Schedule.			3	once/ 3 weeks
6.8	Minimum solution level marking			0	Not available
6.9	Activation tank			3	Available
Score				85%	
7	Phosphating			Score	Observations/Evidences
7.1	Chemical	Display of chemical name and process specification near tank	5%	2	Granodiene 958 AE, Granostarter 65, granotonner C-16 is used, display need to be changed.
7.2	Method			3	Dip type
7.3	Pointage / Concentration			3	Total acid spec- 20-24 ml, actual- 21.2 ml, Free acid spec- 0.8-1.2 ml, actual- 1 ml
7.4	Timer with controller	Buzzer		3	Auto PLC controlled
7.5	Temperature controller and indicator			3	spec- 48-52 deg c, actual- 50.8 ml
7.6	Detected rectifier				NA
Score				93%	
8	Water Rinse- 2				Observations/Evidences
8.1	Method	Dip Type / spray		3	Dip type
		Cascade System (Rinse within inlet and outlet connection)		3	Available



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8.2	PH	after every 3 or 4 hours	3%	1	Concentration is being checked in place of pH
8.3	Air agitation			2	Not available but solution continuously circulated through pump.
8.4	Continuous flow			3	Available
8.5	Bath discard Schedule.			3	Once / week
				83%	
9	CED			Score	Observations/Evidences
9.1	Chemical	Display of chemical name and process specification near tank	10%	2	Display need to be changed
9.2	Method	Dip Type / spray		3	Dip type
9.3	Pointage / Concentration			3	NVM spec- 10-14%, actual- 12.08%
9.4	Timer with controller	Buzzer		3	Auto PLC controlled
9.5	Temperature controller and indicator			3	Spec- 28-32 deg c, actual -29.2 deg c
9.6	Detected rectifier			3	Available
9.7	Chiller unit			3	10 Ton capacity chiller unit available.
9.8	Capacitive Chiller unit			3	
9.9	Filtration system			3	Available
9.10	Off line regeneration tank			3	NA, dump tank available
9.11	Fume exhaust system			3	Available
9.12	Firm clamping of bus bar and cable			3	Satisfactory condition observed.
Score				97%	
10	Ultra-Filtration			Score	Observations/Evidences
10.1	Chemical	Display of chemical name and process specification near tank	5%	2	Display need to be changed
10.2	Method	Dip Type / spray		3	Dip type
10.3	Pointage / Concentration			3	NVM spec- max. 2%, actual- 1.43%
10.4	Timer with controller	Buzzer		3	Auto PLC controlled
10.5	Temperature controller and indicator			3	At room temperature
10.6	Detected rectifier				NA
Score				93%	
11	Baking			Score	Observations/Evidences
11.1	Marked enclosed space away from plating plant		5%	3	Available
11.2	Racks for storage			3	
11.3	Baskets for storage			3	Online conveyrised baking system available.
11.4	Tag system for baking			3	
11.5	Bins for storage			3	Available



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11.6	Temperature Indicator and controller			3	Spec- 180-210 deg c, actual- 180 deg c
11.7	Timer with controller	Buzzer		3	Auto PLC controlled
11.8	Pre set timer			3	Available
Score				100%	
12	Natural Cooling			Score	Observations/Evidences
12.1	Cold air blow		3%	1	Parts are cooled by natural air
12.2	Air temperature			3	Ambient
Score				67%	
13	Availability of Testing Facilities			Score	Observations/Evidences
13.1	Work instruction for testing	Work instruction to be displayed for all test	10%	3	Work Instructions are available.
13.2	Testing Plan			3	Available
13.3	Availability of Thickness tester (Destructive)			0	Not available
13.4	Availability of Thickness tester (non Destructive)			2	Available but master not available.
13.5	SST test			3	Available.
Score				73%	
14	Material Inspection			Score	Observations/Evidences
14.1	Availability of infrastructure for final inspection like, Inspection table, proper illumination min 700 lux, visual instruction for inspection sequence, pictorial displays on defect phenomenon's , reference samples for visual defects, required gauges and measuring instruments etc.		5%	3	Final inspection setup is inadequate. Need to add one more table as per ETL requirement.
14.2	Display of master samples and check sheet at final inspection station.	Master defect sample must be displayed on 100% checking station along with inspection check sheet		1	Master samples are available. But need dust cover samples also.
14.3	All detectable / mutually agreed parameters in final inspection			2	Yes, available
Score				67%	
15	Packing and Storage of Finished Products			Score	Observations/Evidences
15.1	Availability of mutually agreed packing standards?	As per Inspection agreement	5%	1	Available
15.2	Availability of defined system including component wise storage space, stacking height etc.			1	Such system is not defined.
15.3	Use of bins for storage and handling of powder coated components.	After powder coating no component to component contact.		1	Dedicated bins are used.
15.4	FIFO system at FG storage			1	FIFO is followed but FIFO SOP is not available.
Score				33%	
16	Other Requirements			Score	Observations/Evidences
16.1	Organization chart with clear roles and responsibility			2	Available however it is recommended to resubmit it with ECED plant personnel names in it.



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16.2	Dedicated chemist		5%	3	Name- Mr. Sandip Take
16.3	Condition of Jig / Fixture / Masking / ROP of all our parts			2	Satisfactory condition observed, however need to prepare loading matrix with Jig/Hanger design and no.of parts per Jig.
16.4	Other testing plan as per customer requirement.	Refer testing standard as per Part Drawing			NA
16.5	DM Water Plant			3	Available
16.6	No dust on pre treated parts	Mopping to be done on shop floor regularly		3	Satisfactory floor condition observed.
16.7	Availability of Part drawing and related testing standards	Availability of Part drawing and related testing standards		1	REML standard is not available.
16.8	Auto matic / Semi automatic plant with PLC control for stoppage facility of Tanks.	Timer to be provided for Audio visual for PT line.		3	Auto PLC controlled
16.9	Auto matic / Semi automatic plant with PLC control for stoppage interlock with OVEN.	Timer to be provided for Audio visual.		3	Auto PLC controlled , Total 10 Nos of interlock available.
16.10	In -house Pre -Treatment chemical testing Lab.	PT Line parameter checking.		3	Available
16.11	Pre-treatment specification	Pre-treatment chemical specification in line with Chemical Mfg. specifications		3	OK
16.12	PM for EQPT & M/C	Schedule and Plan for PM		3	PM plan and check sheet available.
16.13	Calibration of all Temp controllers , timers, pressure gauges, plating thickness instruments	calibration frequency and plan should available.		3	Equipments are new calibration will be done as per plan
16.14	Operator Skill and Knowledge.	Operator knowledge to perform the inspection of process parameters.		1	Stage wise skill matrix is not available.
16.15	Reworking of powder coated parts.	Process flow for reworking of parts.		3	Available
		Record of rework parts.		3	Available
Score				87%	
17	Process Change Management			Score	Observations/Evidences
17.1	A systematic method is followed for process change management inline with Endurance / Customer Requirements. Awareness system to all members regarding importance of IPP system/ Change management		5%	3	Available
17.2	Approval is taken from Endurance for any change in process sequence, raw material, sub supplier, and outsourcing of internal operations.			3	Followed
17.3	Necessary changes are made in documents w.r.t Endurance approved process changes.			3	Followed
Score				100%	