



Powder Coating Process Audit Check Sheet (Ferrous)

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

Rev. No : 05

Date.:07-05-2021

Supplier Information

Supplier Name:-	Metalman Auto	Certification:- IATF	Consent to Operate: Available	Date:- 19/01/2024
Location:-	B-31/32, Waluj, Aurangabad	Certificate No.:- 0424860	Consent No.:- 96121/R/CC-1256	Assessed By:- 1. Mr. Sudhanshu Dharmadhikari
Contact Person:-	Mr. Shrikant Kulkarni	Expiration:- 08-09-2024	Expiration:- 28-02-2025	3. Mr. Pankaj Rathi
Phone Number:-	7755990028	Registrar:- DNV	Registrar:- MPCB	3. Mr. Sumeet Haldekar

Type of Surface Treatment Process

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

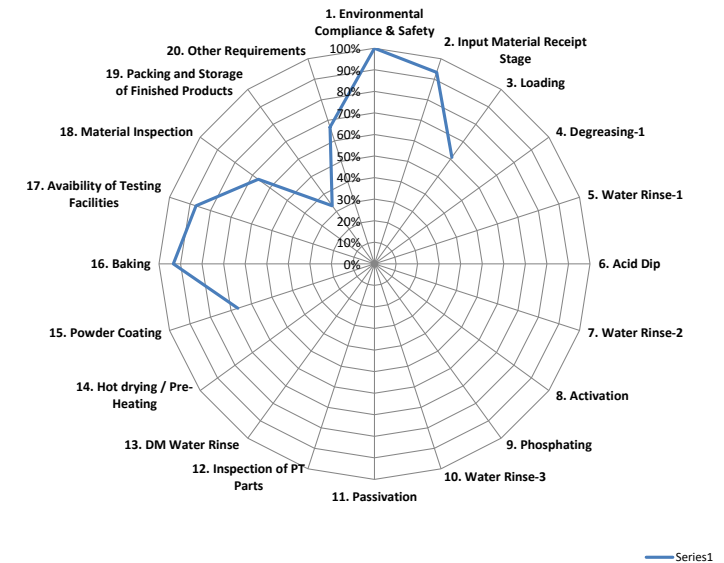
Product Details

Dust cover J1A

Other Customers

BMW, HD, BAL

Sr No	Score	Remark	Criteria	Wtg.	% Score Achieved	Marks Achieved
Scoring Guideline for the Auditors			1. Environmental Compliance & Safety	10	100%	10.0
1	3	System is in place (Complying)	2. Input Material Receipt Stage	3	93%	2.8
2	2	System is in place but needs improvement	3. Loading	5	61%	3.1
3	1	System is in place but not evidenced	4. Degreasing-1			
4	0	No Compliance	5. Water Rinse-1			
Note:-	1.Supplier shall needs 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		7. Water Rinse-2			
			8. Activation			
			9. Phosphating			
			10. Water Rinse-3			
			11. Passivation			
			12. Inspection of PT Parts			
			13. DM Water Rinse			
			14. Hot drying / Pre-Heating			
			15. Powder Coating	15	67%	10.0
			16. Baking	5	93%	4.7
Audit Score	75 ~ 100	Approved	17. Availability of Testing Facilities	10	87%	8.7
	60 ~ 74.9	Supplier action plan required for score revision after re-verification audit	18. Material Inspection	5	67%	3.3
	Less Than 60	Rejected	19. Packing and Storage of Finished Products	3	33%	1.0
			20. Other Requirements	5	67%	3.3
			21. Process Change Management	5	100%	5.0
			22. Maintenance Activities	5	100%	5.0
			71	80	56.9	



Sr No	Check Points	Requirements	Wt.	Mark	Observations/ Evidences
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1 Environmental Compliance & Safety			Score	Observations/Evidences	
# 1.1	MPCB certificate / consent to operate	Availability of valid CTO certificate of pollution control board	10%	3	Available, No-96121/R/CC-1256 , Validity- 28-02-2025
#1.2	ETP, Agreement with CETP & Environ Power for Sludge Disposal	Availability of ETP, CETP or equivalent certificate from valid agency		3	Available, MEPL membership validity- 09/08/2027
# 1.3	Compliance to STP requirement as per CTO	Availability of STP in operating condition & regular monitoring of parameters as per CTO		3	STP Available
#1.4	Legal Compliances as per factory Act	Availability of Factory act / Valid License / Permit to work from Govt Agency		3	No-121503091300846, Date- 23/03/2021
* 1.5	Are required PPE'S (Personal Protective Equipments) are provided? PPE matrix available?	Safety shoes, Helmets, Gloves & goggles as applicable		3	PPE's are provided - Hand gloves & masks, PPE matrix is available & dsplayed at shop floor.
1.6	Do supplier have provision of fire extinguishers, emergency exists etc.?			3	FE- 16 Nos ABC type + CO2 type available.
Score				100%	
2 Input Material Receipt Stage			Score	Observations/Evidences	
2.1	Proper storage & Identification	Material must be stored under controlled atmosphere.	3%	3	Proper storage is available with identification.
2.2	Chemical Storage, Inventory norms & issue system	Defined storage for chemicals with MSDS, check for inventory management & chemical issue for line		3	Powder storage is available, humidity & temp inside powder storage is monitored. Log book is available for powder issue to powder coating booth. Display of MSDS is also available
2.3	Chemical supplier	Check for ETL approved chemical source is being used		3	REML recommonded Berger make black matt powder is available
* 2.4	Chemical shelf life / Expiry Control mechanism & FIFO	Defined shelf life monitoring with FIFO system		3	Powder shelf life monitoring is available
2.5	Inward Inspection	There should be 100% inspection for Rust. No rusty material should go for Powder coating		2	Inward inspection station is available. CED defect dsplay to be made available.
Score				93%	
3 Loading			Score	Observations/Evidences	
* 3.1	Jigs for all components	Check for Jig Validation, Jig mapping & signed off loading matrix for all applicable parts	5%	1	Loading matrix available. Jig validation record not available. Jig mapping not done
3.2	Condition of Jig / Fixture / Masking / ROP of all our parts	Check for Jig damage, loose contacts etc.		2	Satisfactory condition observed.
3.3	SOP for loading with Weight/Area Calculation Chart	Check for partwise matrix with weight/area calculation, Fixed Voltage & Current charts display		2	Loading SOP is available
3.4	Rework SOP for Rusty part			2	Not applicable - CED painted parts at receipt
*3.5	Pre-treatment specification	Pre-treatment chemical specification in line with Chemical Mfg. specifications		2	NA
3.6	No dust on pre treated parts	Mopping to be done on shop floor regularly		2	Satisfactory condition observed.
Score				61%	
15 Powder Coating			Score	Observations/Evidences	
* 15.1	Approved Powder as specified. :-----	Check for approved powder is being used	15%	2	New part development.
15.2	Powder supplier name:-----	Akzonoble, Kansai Nerolac, Paracoat, Berger,		2	Kansai Nerolac
* 15.3	Powder certificates	Powder test certificate for every Batch.		2	Test certificated are available
15.4	FIFO for Powder / Monitoring Expiry date	System / record should be available		1	FIFO Sop is not available
15.5	Mixing of Recycled powder (Fresh 70 % minimum)	Recommended 80 % Fresh + 20 % Recycled		2	80:20 ratio is used, Sieving mesh is available.
15.6	Dedicated booths for different powder colors. / powder grades. (Spec as per Control Plan)	Visual display of booths as per colour and powder grade.		2	2 booths are available
15.7	Fluidized bed/unit with Air pressure	start of the shift		3	Available



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* 15.8	Powder coating gun parameters with validation report	check for, 1) Voltage 2) Current 3) Atomizing air 4) Powder flow rate 5) Air pressure	2	Volatge- 60 KV, current- 70 µA, Air pressure- 6 kg/cm2, Powder flow- 33
15.9	Conveyor Speed	Conveyor Speed	2	0.45 MPM
Score			67%	
16	Baking		Score	Observations/Evidences
*16.1	Baking oven temp. / Time (as per control plan)	start of the shift	3	Spec- 230 deg c, actual- 227 deg c
16.2	Powder sieving Mesh.	To be filtered through 120 Mesh.	3	Available
16.3	Availability of proper masking	No powder on masked area of part	5%	NA
16.4	Filling of Hooks.	Hooks to be cleaned for better earthling.	3	Satisfactory condition observed.
16.5	Oven Type	Gas fired/Diesel fired/electrical	3	Gas fired oven
* 16.6	TTR of oven	once in six month	2	Yes available
Score			93%	
17	Availability of Testing Facilities	Must Facility (with * Mark)	Score	Observations/Evidences
17.1	In -house Pre -Treatment chemical testing Lab.	PT Line parameter checking.	2	Powder coating testing lab is available
* 17.2	Work instruction for all testing facilities	Work instruction to be displayed for all test	3	Work Instructions are available
17.3	Testing Plan		3	Testing plan is available
* 17.4	Gloss (Desired) Meter		3	Available
17.5	Powder coating Thickness		3	Available
* 17.6	Adhesion Test	Adhesion (Tape and cutter), Permaseal 254, ASTM Make	3	Available
* 17.7	Pencil test		3	Available
* 17.8	Impact Test		3	Available
* 17.9	MIBK / MEK test		3	Available
17.10	Parts Drawing & Testing Standards	Availability of Part drawing and related testing standards & Customer specific standards	10%	Drawing and standard is available.
* 17.11	Flexibility test		3	Available
* 17.12	SST test		3	Available
17.13	Water Immersion test		3	Available
* 17.14	Humidity test		3	Available
17.15	Acid test		3	Available
17.16	Alkaline test		3	Available
* 17.17	UV test		0	Not available
17.18	Taber abrasion Test		0	Not available
Score			87%	
18	Material Inspection		Score	Observations/Evidences
18.1	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.	Check for signed off Inspection agreement	2	Inspection agreement is available. Skill matrix available. 800-1000 lux level is available. Inspection records are available.



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18.2	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	5%	2	Master samples are available.
18.3	All detectable / mutually agreed parameters in final inspection	Records for DFT thickness, Shade as per master sample, Adhesion test		2	DFT , adhesion test records are available.
* 18.4	Past Quality problems & Actions	RCA & action plan for ETL's customer complaints, rejection at ETL , effectiveness & Sustenance of actions		2	Customer complaints record is available. Action plan is available.
* 18.5	Supplier In-house rejections & actions	Monitoring, Counter measures & close looping of in-house quality problems / Rejection, effectiveness & Sustenance of actions		2	Inhouse rejection data and why- why analysis is available.
* 18.6	Operator Skill and Knowledge.	Station wise skilled operator Skill Matrix, check for respective technical know how on sub process		2	Skill matrix is available.
* 18.7	Rework process for powder coated parts	Check for Rework SOP, Records & Process flow for reworking of parts.		2	Rework sop is available.
Score				67%	
19	Packing and Storage of Finished Products			Score	Observations/Evidences
19.1	Usages mutually agreed packing standards?	As per Inspection agreement	3%	1	System to be implemented after approval
19.2	Defined system including component wise storage space, stacking height etc.			1	System to be implemented after approval
19.3	Use of bins for storage and handling of powder coated components.	check for Cleanliness of bins & cleaning frequency (WI)		1	System to be implemented after approval
19.4	Do supplier have FIFO system at FG storage			1	System to be implemented after approval
Score				33%	
20	Other Requirements			Score	Observations/Evidences
* 20.1	Organization chart with clear roles and responsibility	Availability of required competent people for each shift	5%	2	Organization chart is available but QA head position is vacant.
* 20.2	In -house Pre -Treatment chemical testing Lab.	Dedicated facility for Line parameter Testing check for Availability of Dedicated chemist		NA	
20.3	DM Water Plant	Check for conductivity records		3	Available
* 20.4	Availability of line stoppage interlocks	Interlock for Temp overshoot, Oven, Conv. Speed		2	Conveyor temp. interlock is available.
20.5	Calibration of all Temp controllers , timers, pressure gauges, plating thickness instruments	calibration frequency and plan should available.		3	Calibration records are available
* 20.6	Availability of PFD, Control plan & process validation report	Process validation to be done once in year		2	Control plan and PFD available but process validation report is not available.
20.7	Lot Identification & Traceability	Check for lot identification & traceability (as applicable)		0	System is not in place
Score				67%	
21	Process Change Management			Score	Observations/Evidences
21.1	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	Procedure is available
21.2	Approval is taken from Endurance for any change in process sequence, raw material, sub supplier, and outsourcing of internal operations.			3	Followed
21.3	Necessary changes are made in documents w.r.t Endurance approved process changes.			3	Followed
Score				100%	
22	Maintenance Activities			Score	Observations/Evidences



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* 22.1	Preventive Inspection (PI), Preventive Maintenance (PM) for EQPT & M/C	Schedule and Plan for PI & PM, availability of applicable check sheets	5%	3	PM plan and checksheet is available.
* 22.2	Bath Make up & Discard Schedule	Check for dedicated WI & records		NA	
22.3	Cleaning of Filters & Oil skimmers	Check for records		NA	
* 24.4	Clean & Dry air supply to powder coating booth	Check for Oil separator, Moisture separator dryer, Filtration regulator units		3	Clean air supply is available.
24.5	Dedicated Powder coating process Maintenance check sheets	Booth cleaning, Hopper cleaning, Gun cleaning, Oven Cleaning Check sheets		3	Dedicated checksheet is available.
Score				100%	