Special Process: Coating System Assessment Cover Sheet

Facility Name: Custom Coating Inc

Address: 1937 Jacob St.

Auburn, IN

Phone Number: 260-925-0623

Current Quality Certification(s): ISO9001:2015

Number of Coating Employees at this Facility: 20

Captive Coater (Y/N): NO

Commercial Coater (Y/N): YES

Date of Assessment: July / August 2024 = Finished August 2nd, 2024

Date of Previous Assessment: August 2023

Date of Re-assessment (if necessary): **10/2/2024** (NCR from 8/2024 corrected)

Type(s) of Coating Processing at this Facility:

Process Table A: Alkaline cleaner	**Process Table G: N/A**
Pretreatment (Aqueous)	Dip-Spin & Zinc Flake
Process Table B: Wheelabrator / Roto-Finishing	**Process Table H: N/A**
Pretreatment (Mechanical)	Autodeposition
Process Table C: Manganese Phosphate (1 line) & Bonderite (Alodine) (2 lines)	**Process Table I: N/A**
Conversion Coatings	Cure
Process Table D: N/A	**Process Table J: N/A**
Powder Coating	Anodizing and Hard Coat Anodizing
Process Table E: N/A	**Process Table K:**
Spray Coating	Equipment
Process Table F: N/A	
Electrocoat	

Personnel Contacted:

Name:	Phone:
Gene Thorp	260-925-0623 x 209
Justin Cooper	260-925-0623 x 214

Auditors/Assessors:

Name:	Phone:
Dawn O'Bran	260-925-0623 x 212
Melody Kitt	260-925-0623 x 203

Number of Nonconforming Findings from Section 1 and Section 2: 0

Number of Nonconforming Findings in the Job Audit(s): 0

Number of Nonconforming Findings in the Process Table(s):

	Section 1 - Management Responsibility & Quality Planning
1.1	There shall be a dedicated and qualified surface finishing person on site.

• To ensure readily available expertise, there shall be a dedicated and qualified surface finishing person on site.
• This individual shall be a full-time employee and the position shall be reflected in the organization chart.
• A job description shall exist identifying the qualifications for the position including coating and surface finishing knowledge.
• The qualifications shall include a minimum of 5 years experience in surface finishing operation or a combination of a minimum of 5 years of relevant formal education and surface finishing experience.

Guidance	Objective Evidence	Conforming Nonconforming NA
What is this person's title?	Line Supervisor and PM/QM	**conforming**
Is this position reflected in the organizational chart?	yes, form 100	**conforming**
Is there a documented job description listing all the required qualifications and responsibilities of this position?	yes, Job 108	**conforming**
Describe in detail this person's educational background and practical experience.	on-the-job and tech training with chemical mfg	**conforming**
How many years of process experience at a coating facility does this person have?	5+ years	**conforming**
Is this individual a full-time employee at the location being audited?	yes - all full time	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.2	The facility shall perform advanced quality planning.

• The organization shall incorporate a documented advanced product quality planning process.
• A feasibility study shall be performed and internally approved for each new part or process. Similar parts can be grouped into part families for this effort as defined by the organization.
• After the part approval process is approved by the customer, no process changes are allowed unless approved by the customer.
• The organization shall contact the customer when clarification of process changes is required. This clarification of process changes shall be documented.

Guidance	Objective Evidence	Conforming Nonconforming NA
Does the facility use a documented advanced quality planning process?	no - Not required under ISO 9001:2015	**N/A**
Does the facility perform a documented internal feasibility study for each part before processing? If no, does the facility perform a documented internal feasibility study for similar part types or family of parts before processing?	yes part feasibility completed at each quote prior to processing	**conforming**
What is the procedure for changing the process after PPAP?	PRO -101	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.3	The facilities FMEAs shall be up to date and shall reflect the current process.

• The organization shall incorporate the use of a documented Failure Mode and Effects Analysis (FMEA) and ensure the FMEAs are updated to reflect current part quality status.
• The FMEA shall be written for each part or part family or they may be process specific and written for each process.
• FMEAs shall address every process step from part receipt to part shipment.
• A cross-functional team shall be used in the development of the FMEA.
• All special characteristics, as defined by the organization and its customers, shall be identified, defined, and addressed in the FMEA.

Guidance	Objective Evidence	Conforming Nonconforming NA
Does the facility have a documented Failure Mode and Effects Analysis (FMEA) in use?	yes, updated 2019 (alodine) & 2020 (phospate)	**conforming**
Identify the names and job function of the team members used in the development of the FMEA.	R. Meyer / PM, D. Davis / QM, J. Cooper / LS, G. Thorp / LS	**Conforming**
Identify if the FMEA is written for each part, part family or process specific.	Process	**conforming**
Are all FMEAs consistent with all associated documentation such as control plans, work instructions and shop travelers?	yes	**conforming**
Do all FMEAs include every process step from part receipt to part shipment?	yes	**conforming**
Are special characteristics, as defined by the organization and its customers, identified, defined, and addressed in the FMEAs?	no special characteristics ID'ed by our customers for our process - so not ID'ed on our documentation	**conforming**
Provide evidence that the FMEA has been updated in response to quality issues.	Update in 2019 and 2020 were related to quality concerns	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.4	The process control plans shall be up to date and shall reflect the current process.

• The organization shall incorporate the use of a documented control plan and ensure the control plans are updated to reflect current controls.
• The control plans shall be written for each part or part family or they may be process-specific.
• The control plans shall address all process steps from part receipt to part shipment and identify all equipment used and all key surface finishing process parameters as defined by the organization.
• A cross-functional team shall be used in the development of control plans, which shall be consistent with all associated documentation such as work instructions, shop travelers, and FMEAs.
• All special characteristics, as defined by the organization and its customers, shall be identified, defined, and addressed in the control plans.
• The control plan shall detail the product and process characteristics, and controls including testing frequency and sample size.

Guidance	Objective Evidence	Conforming Nonconforming NA
Does the facility have a documented control plan in use?	yes, same revision dates as FMEA	**conforming**
Identify if the control plan is written for each part, part family or process specific.	process specific	**conforming**
Do all control plans include every process step from part receipt to part shipment?	yes	**conforming**
Does the control plan identify all key surface finishing process parameters?	yes	**conforming**
Identify the names and job function of the team members used in the development of the control plan.	R. Meyer / PM, D. Davis / QM, J. Cooper / LS, G. Thorp / LS	**conforming**
Are the control plans consistent with all associated documentation such as work instructions, shop travelers, specifications and FMEAs?	yes	**conforming**
Provide evidence that sample sizes and frequencies for evaluation of process and product characteristics are addressed and consistent with the minimum requirements.	Control plans state frequency of titrations and these match the titration logs	**conforming**
Are special characteristics, as defined by the organization and its customers, identified, defined, and addressed in the control plans?	no special characteristics ID'ed by our customers for our process - so not ID'ed on our documentation	**conforming**

Provide evidence that the control plan has been updated in response to quality issues, customer requirements and process changes.	Update in 2019 and 2020 were related to quality concerns	**conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning
1.5	All surface finishing related and referenced specifications shall be up to date and available. For example: SAE, AIAG, ASTM, General Motors, Ford, FCA, Toyota, Volvo Truck.

• A document control system is pertinent for the handling and internal distribution of received customer specifications and to keep up to date with national or global standards related to surface finishing processes. To ensure all customer requirements are understood and satisfied, the organization shall have all related surface finishing and customer referenced standards and specifications available for use and a process to ensure that they are current.
• The organization shall have a process to ensure the timely review, distribution, and implementation of all customer and industry engineering standards and specifications and changes based on customer required schedule. This process shall be executed as soon as possible and shall not exceed two weeks.
• The organization shall document this process of review and implementation, and it shall address how customer and industry documents are obtained, how they are maintained within the organization, how the current status is established, and how the relevant information is cascaded to the shop floor within the two week period.
• The organization shall identify who is responsible for performing these tasks.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
Does the organization have all related surface finishing and customer referenced standards and specifications available for use?	yes, as received from our customers	**conforming**
How are standards and specifications obtained?	from our customers	**conforming**
Describe the system and timing used to maintain the standards and specifications to ensure that they are up to date.	we update during quote process when new rev is provided to us from our customer	**conforming**
Define that process used to review and communicate within the two week period updated standards and specifications throughout the organization. Include the names and job functions of the responsible personnel.	QM reviews any updated relivent information and relays these updates to appropriate line supervisors within a 48 hr period	**conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning
1.6	There shall be documented process instructions.

• The organization shall have written process instructions for all active parts or family of parts, including relevant part specific requirements. Examples of part specific requirements include process line, coating type, load size, and rectifier settings.
• These process instructions may take the form of work instructions, job card, computer-based recipes, or other similar documents.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
Does the organization have written process instructions for all active parts or family of parts and include all relevant operating parameters?	we utiilzie process map and job sheets - these can be both customer specific, part specific or even family specific	**conforming**
What form of process specification is used? (These may be in the form of work instructions, job card, computer-based recipes, or other similar documents.)	work instruciton, compuoter based recipes, job sheets. We do not utilize job card or job travelers.	**conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning

1.7	A valid product capability study shall be performed.

• To demonstrate each process is capable of yielding acceptable product, the organization shall perform product capability studies for the initial validation of each process, after relocation of any process equipment, and after a major change of any process or equipment. The organization shall define what constitutes a major change.
• Initial product capability studies shall be conducted for all surface finishing processes per line as defined in scope of work and in accordance with customer requirements. Capability study techniques shall be appropriate for the surface finishing product characteristics (e.g., surface finishing thickness, corrosion resistance).
• An action plan shall exist to address the steps to be followed in case capability indices fall outside customer requirements or established ranges.

Guidance	Objective Evidence	Conforming Nonconforming NA
Has an initial product capability study been performed?	Coating weight capability studies completed for each process when onboarded	**conforming**
Are studies conducted for each surface finishing process for each line in the facility?	as noted above (3 lines total)	**conforming**
Has a new study been completed after relocation of any process equipment, major rebuild of any equipment, or any significant change in process chemistry?	yes as defined in PRO-100	**conforming**
How does the organization define what constitutes a major change?	It is defined in PRO-100	**conforming**
What steps are followed when capability indices fall outside specified requirements?	Steps outlined in PrO-105	**conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning
1.8	The organization shall collect, analyze, and react to product and process data over time.

• The analysis of product characteristics and processes parameters over time can yield vital information for defect prevention efforts.
• Methods of analysis shall include ongoing trend or historical data analysis of special product and process parameters.
• The organization shall determine which parameters to include in such analysis.

Guidance	Objective Evidence	Conforming Nonconforming NA
What product characteristics and process parameters are used?	Coating weight and tank titrations, conductivity, as defined on control plans	**conforming**
How is the ongoing trend or historical data reviewed and analyzed?	through titration logs, nonconformance reports	**conforming**
How does the organization use this data to prevent future failures and improve the quality system?	through our CI program and risk assesments	**conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning
1.9	All process control and testing records must be retained for a minimum of one calendar year after the year in which they were created.

Guidance	Objective Evidence	Conforming Nonconforming NA
What is the process to retain these records?	PRO - 102	**conforming**
What is the process for retention of customer specific documents with longer retention times?	PRO - 102	**Conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning

1.10	There shall be a process in place to review the monitoring systems/logs at specified intervals.

• Management or management designee shall review the monitoring systems/logs at specified intervals.
• The organization shall have reaction plans for nonconformances to process requirements.

Guidance	Objective Evidence	Conforming Nonconforming NA
Define the process in place to gather and review this information.	PRO - 100	**conforming**
Identify the manager or management designee reviewing the process records from the monitoring systems/logs.	PM / QM - Management responsible for the overal QMS	**conforming**
Describe reaction plans for nonconformances to the written process requirements.	Hold product, adjust baths, notify and rework as required	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.11	Internal assessments shall be completed at a minimum once every 12 months using the latest revision of the AIAG CQI-12 Coating System Assessment.

Guidance	Objective Evidence	Conforming Nonconforming NA
What is the date of the last AIAG CQI-12 Coating System Assessment?	8/2/2024	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.12	There shall be an internal system in place to authorize reprocessing and it shall be documented.

• The quality management system shall include a documented process for reprocessing that shall include authorization from the quality manager or a designated individual.
• The reprocessing procedure shall describe product characteristics for which reprocessing is allowed as well as those characteristics for which reprocessing is not permissible.
• All reprocessing activity shall require a separate rework specific process control sheet or other identification method issued by qualified technical personnel denoting the necessary surface finishing modifications.
• Records shall clearly indicate when and how any material has been reprocessed.
• The rework of material shall comply with the customer's specifications and/or requirements.

Guidance	Objective Evidence	Conforming Nonconforming NA
Describe the procedure for authorizing reprocessing of nonconforming material.	PRO - 100	**conforming**
Does the reprocessing procedure describe product characteristics that allow or not allow reprocessing?	Yes, as defined in the procedure	**conforming**
Did the quality manager or manager's designee authorize the rework and determine the reprocessing procedure?	Yes, as defined in the procedure	**conforming**
How do you identify that material has been reprocessed?	noted on LOT tag	**conforming**
Do the records clearly indicate when and how any material has been reprocessed including the quality manager's authorization of release?	yes, noted on LOT tag and inspection logs	**conforming**
Provide evidence that the rework complies with your customer's specifications and/or requirements.	Coating weight	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning

1.13	The Quality Department shall review, address, and document customer and internal concerns.

The quality management system shall include a process for documenting, reviewing, and addressing customer concerns and any other concerns internal to the organization.

Guidance	Objective Evidence	Conforming Nonconforming NA
Describe the procedure for reviewing and addressing external customer and internal concerns.	Nonconforming log + CAR / CI log	**conforming**
Describe the problem solving approach that is used.	8D / 5-Why - When requested	**conforming**
Describe the communication process used to respond to the originator.	email w/ documentation - initial response within 24 hrs	**conforming**
Provide a recent example of this procedure in use.	CAR 20240529	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.14	The organization shall have a continual improvement process.

- The continual improvement process shall be designed to achieve improvements in quality and productivity.
- Identified actions shall be prioritized and shall include timing (estimated completion dates).
- The organization shall show evidence of program effectiveness.

Guidance	Objective Evidence	Conforming Nonconforming NA
Describe the continual improvement process used to achieve improvements in quality and productivity.	LOG-103 + QMS objectives to monitor involvement	**conforming**
Provide a recent example of how actions are identified, prioritized and completion dates assigned.	review in bi-weekly staff meeting & post status	**confoming**
Describe how the organization measures the effectiveness.	>3 suggested, >1 implimented per month	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.15	There shall be predefined personnel responsible for management of materials in quarantine area.

Only the quality manager or designee may authorize the disposition of material from quarantine status.

Guidance	Objective Evidence	Conforming Nonconforming NA
Define the process for release of material from quarantine.	PRO-100	**conforming**
List the authorized personnel with job titles.	PM, QM, Line Supervisors	**conforming**
Review evidence that only these persons are releasing materials from the quarantine area.	as defined in PRO-100	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.16	There shall be documented procedures and/or work instructions for all processes and they shall be available to all of the organization's personnel.

• There shall be procedures or work instructions available to personnel covering their responsibilities.
• These documents shall include instructions for addressing potential emergencies (such as power failure), equipment start-up, equipment shut-down, product segregation (See 2.3, 2.8), product inspection, and general operating procedures.

Guidance	Objective Evidence	Conforming Nonconforming NA
Review the procedure/work instruction for process start-up and shut-down.	as defined in line specific process manual	**conforming**
Review the procedure/work instruction for process control during operation.	as defined in line specific process manual and control plan	**conforming**
What is the procedure in place to address potential emergencies? (Such as power outage and/or equipment failure).	as defined in our contigency planning	**conforming**
Review the procedures for inspection of the product, in process or after completion.	as defined in WI 309 and WI 201	**conforming**
Verify that these procedures/work instructions are accessible to personnel performing the job at all times.	located on plan floor and accessible to personnel	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.17	The organization and management shall provide employee training.

• The organization shall provide employee training for all operations.
• All employees, including backup and temporary employees, shall be trained.
• Documented evidence shall be maintained showing the employees trained and the evidence shall include an employee assessment.
• Management shall define the qualification requirements for each function, and ongoing or follow-up training shall also be addressed.

Guidance	Objective Evidence	Conforming Nonconforming NA
Review the process for initial training of all employees, including backup and temporary.	Form 115, training flowchart	**conforming**
Review the process for ongoing and/or follow-up training.	Form 116, employee evaluations & Form 112, additional training	**conforming**
Provide a recent copy of the training matrix.	Job-100 skill matrix last updated 6-3-24	**conforming**
Provide documented evidence that shows how the organization verifies effectiveness of training.	Form 116, employee evaluations	**conforming**

Comments:

	Section 1 - Management Responsibility & Quality Planning
1.18	Essential management and supervisory functions shall be performed by qualified personnel at all times and a matrix of these essential responsibilities shall be available for review.

• The organization shall maintain a responsibility matrix identifying all essential management and supervisory functions and list the qualified personnel who may perform such functions.
• It shall identify both primary and secondary (backup) personnel for the essential functions (as defined by the organization).
• This matrix shall be readily available to management at all times.

Guidance	Objective Evidence	Conforming Nonconforming NA
Review and provide an example of the most recent matrix.	Job 100	**conforming**
Confirm that the matrix includes both primary and secondary persons.	yes it does	**conforming**

Describe how and where this information is made available.	it is posted in two locations in the plant	**conforming**
Comments:		

	Section 1 - Management Responsibility & Quality Planning
1.19	There shall be a preventive maintenance program and maintenance data shall be utilized to form a predictive/preventive maintenance program.

• The organization shall have a documented preventive maintenance program for essential process equipment (as identified by the organization).
• The program shall be a closed-loop process that tracks maintenance efforts from request to completion to assessment of effectiveness.
• Equipment operators shall have the opportunity to report problems and problems shall also be handled in a closed-loop manner.
• Company data (e.g., downtime, quality rejects, first time-through capability, recurring maintenance work orders, and operator-reported problems) shall be used to improve the preventive maintenance program.
• Maintenance data shall be collected and analyzed as part of a preventive maintenance program.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
Show evidence that a documented preventive maintenance program exists.	PM 40, 50 and 20	**conforming**
Describe the process for reporting problems.	PRO-103	**confomring**
Provide a recent example showing that the person reporting the problem received feedback after the problem was resolved.	forktruck with leak, tagged and placed in maintenance. Feedback proficed in staff meeting	**conforming**
Give a recent example of how the program was used to prevent/predict potential equipment failure.		**n/a**
How is the data being generated reviewed with management to improve the quality system?	during management review and staff meetings	**confomring**
Comments:		

	Section 1 - Management Responsibility & Quality Planning
1.20	The organization shall develop a critical spare part list and the parts must be available to minimize production disruptions.

• Spare part suppliers, minimum quantity and lead times shall be documented.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
Provide the critical spare parts list.	3 individual lists for each line	**confomring**
Does the critical spare parts list include inventory, lead time and suppliers?	yes it does	**conforming**
Describe how and when the organization updates the list.	during management review and staff meetings	**conforming**
What criteria are used to determine whether critical spare parts are kept at the facility or sourced off site?	lead time, cost, replacement history	**conforming**
Describe the process used to maintain minimum quantities.	inventory completed monthly	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.1	The organization shall ensure that customer data entered into the receiving system matches the customer's shipping documents.

It is critical that all customer requirements and lot identification be correctly transferred to internal documents.
• The facility shall ensure that the data entered in the receiving system match the information on the customer's shipping documents.
• Documented processes and evidence of compliance shall exist (e.g., shop travelers, work orders).
• Sometimes the material received does not precisely correspond to customer shipping documents. The facility shall have a detailed procedure in place to resolve receiving discrepancies.
• The requirements stated above apply to captive, in-house, commercial and all involved departments.

Guidance	Objective Evidence	Conforming Nonconforming NA
Describe the receiving process including listing the documentation used.	WI-120	**conforming**
Describe the process to identify the coating requirements.	Quote, part set up, computer programing, job sheets	**conforming**
Describe the reaction process when material received does not correspond to the customer's documents.	PRO-100	**conforming**

Comments:

	Section 2 - Floor and Material Handling Responsibility
2.2	Is product clearly identified and stored throughout the surface finishing process and is lot traceability and integrity maintained?

Procedures are required for part and container identification to avoid incorrect processing or mixing of lots.
• As received, in-process, and finished product or material shall be properly segregated, identified, and stored in a dedicated and clearly defined area.
• Out-going lot(s) shall be traceable to the incoming lot(s).
• The discipline of precisely identifying lots and linking all pertinent information to them enhances the ability to do root cause analysis and continual improvement.

Guidance	Objective Evidence	Conforming Nonconforming NA
Describe the method that ensures the parts and lot numbers are correctly identified and maintained throughout the process.	WI 123	**conforming**
Verify that received, in-process, and finished product or material is properly segregated, identified, and stored in a dedicated and clearly defined area.	WI-125	**conforming**

Comments:

	Section 2 - Floor and Material Handling Responsibility
2.3	Procedures shall be adequate to prevent movement of nonconforming product into and out of the production system.

The control of suspect or nonconforming product is necessary to prevent inadvertent shipment or contamination of other lots.
• Procedures shall be adequate to prevent movement of nonconforming product into the production system.
• Procedures shall exist addressing authorized personnel, appropriate disposition, product identification and tracking of material flow in and out of hold area.
• Nonconforming hold area shall be clearly designated to ensure segregation of such material.

Guidance	Objective Evidence	Conforming Nonconforming NA
Where is the nonconforming holding area, and how is it identified?	e/ building w/cones and signs	**conforming**
Describe the procedure to prevent the unauthorized movement of nonconforming products.	PRO-100	**conforming**

Provide evidence that material movement in and out of this area is documented.	QM - non conforming log	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.4	For bulk processing there shall be a procedure to identify trap points throughout the entire process to reduce risk of unfinished, improperly coated and mixed parts.

• The organization shall have documented procedures to identify and monitor all trap points for each process/equipment.
• Monitoring of potential trap points shall occur at minimum every part changeover.
• Trap points may include baskets, barrels, bins, part containers, loading and unloading equipment, oven belts, load hoppers and transfer belts.

Guidance	Objective Evidence	Conforming Nonconforming NA
Describe the procedure to identify and monitor all trap points for each process and/or equipment.	no trap points per design	**conforming**
Provide the list of trap points.	n/a	**n/a**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.5	The handling, storage and packaging shall be adequate to ensure product quality is maintained throughout the entire process.

• Handling, storage, and packaging shall be adequate to ensure product quality.
• Part cleanliness shall be maintained throughout the process.
• All parts shall be stored in a controlled environment.

Guidance	Objective Evidence	Conforming Nonconforming NA
Which process steps have dedicated in-process containers?	All coating lines have dedicated in-process containers, depending on geometry of customer part different containers are used as	**confomring**
How are containers maintained to preserve part cleanliness?	PM system and inspection	**conforming**
Describe how the containers are inspected to ensure they are free of foreign material.	visual insection from operators	**conforming**
What is used for liner material of customer containers before packing finished goods for shipment? (Materials like newspapers, used cardboard and bags should be avoided).	we utilize what the customer has supplied. If they want a special liner they supply that material and it is noted on the job sheet	**conforming**
Provide a list of dedicated storage areas that avoid exposure to contamination and corrosion. (Storage outdoors, near media blasting and corrosive processes such as acid tanks should be avoided).	storage areas are indoors away from media blasing and acid tanks	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.6	Each process step shall be documented and traceable.

How does the operator verify that all process steps have been completed in specified order and in within specified time limits?

Guidance	Objective Evidence	Conforming Nonconforming NA
Do you have a document (e.g., shop travelers, job sheet) that specifies all the processes for each part number/part family?	job sheets are either customer specific, part family or part number - as needed to define requirements	**conforming**
Define the procedure that ensures that all processes have been completed in the specified order.	process manuals - controlled process receipe	**conforming**

Describe how time sensitive processes are completed in the specified time limits (e.g., wet part transfer).	only time sensitive process is coating - all 3 lines are a inline	**conforming**
Provide documentation that this process has been followed.	our exit data shows time of all stages	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.7	Part loading shall be specified, documented and controlled.

• Loading parameters shall be specified, documented and controlled.
• Examples include parts per rack, part position and orientation, weight per barrel/basket or masking.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
Describe how the loading parameters are communicated to the operator.	job sheets	**conforming**
Identify how the loading weight or rack quantity is recorded for each load or rack.	we load per job sheets that has taken in account weight and rack	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.8	There shall be a procedure for material handling, containment action and product segregation in the event of an unplanned process interruption.

Unplanned downtime greatly increases the risk of improper processing.
• Work instructions specifically addressing potential types of unplanned process interruptions shall be accessible to operators.
• Specific instructions shall address containment/reaction plans for each step of the process. Where processes are time critical, immediate actions are required. Examples include process steps exposing parts to acidic solutions, current, bake or curing processes.
• Evidence shall exist showing disposition and traceability of affected product.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
What procedure is used to address each step of the process?	PRO-100 and control plan	**conforming**
Provide all work instructions that address unplanned process interruptions.	PRO-100 , control plan, WI 301, nonconforming log	**conforming**
How is the affected product traced, dispositioned and documented?	nonconforming log	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility
2.9	Plant cleanliness, environment, and working conditions shall be conducive to ensure product quality.

• Plant cleanliness, housekeeping, environmental, and working conditions shall be adequate to preserve product quality.
• A housekeeping policy shall be clearly defined and executed.

Guidance	**Objective Evidence**	**Conforming Nonconforming NA**
Provide a copy of the housekeeping procedure.	Supervisor dependent	**conforming**
Provide a copy of the procedure used to handle dropped or spilled parts.	WI 105	**conforming**
Describe what is done with loose parts found on the floor of the plant.	WI 105	**conforming**

Define the process used to review the facility for conditions that are detrimental to quality processing such as chemical spills and inadequate ventilation.	management review / staff meetings	**conforming**
Comments:		

	Section 2 - Floor and Material Handling Responsibility		
2.10	Plant lighting shall be adequate in all inspection areas.		
Lighting in the part and/or process inspection areas must be adequate for the intended operation.			
Guidance		**Objective Evidence**	**Conforming Nonconforming NA**
How do you ensure the lighting in the part and/or process inspection areas, including loading and unloading areas, is adequate for the intended operation?		management review / staff meetings	**conforming**
For part inspection, how do you arrange the lighting to avoid spot lighting, glare, shadows and distracting reflections?		As defined by maintenenace	**conforming**
Comments:			

Section 4 - Coating System Assessment Job Audit - Finished Product Review

	Job Identity: CCI Lot # 189073	
	Customer: Accuger	
	Shop Order Number: 036447	
	Part Number: 40257228	
	Part Description:	
	Material Substrate: Steel	
	Coating Requirements: 300-1500 mg/sq ft monthly check	
	Specification Number and Revision: Rev J MS-4035	

Question Number	Inspection Element	Identify Relevant Documents & Actual Condition (Provide Data or Values & Embed or Attach Documents)	Conforming Nonconforming NA
4.1	Attach evidence that the documentation for the specific part conforms to the requirements including: • Advanced quality planning process • FMEA • Process Control Plan	FMEA and Control - process specific	**conforming**
4.2	What customer specifications or requirements are used for this part? • List the specification(s) and revision(s)	MS-4035	**conforming**
4.3	Provide evidence of receiving inspection.	Lot Tag Issued	**confomring**
4.4	Provide the job traveler or attach a copy of this traveler showing: • Customer name • Lot number • Weight/quantity • Process instructions • Inspection requirements	We do not use a job traveler - Lot tag issued and Job sheet for this available	**conforming**
4.5	If the lot is divided, how is the traceability maintained throughout the process?	basket number recored for each batch processed	**conforming**
4.6	Describe the method used to document each operation as being completed. Is there a sign-off with time stamp, bar code or scan, etc., after each operation?	exit data - this is controlled via computer receipe	**conforming**
4.7	Attach work instructions applicable to this part indicating proper barrel/basket mesh size or perforation (hole size), load size, appropriate rack configuration, appropriate part orientation on rack, etc.	job sheet reviewed and available	**conforming**
4.8	Identify each process table pertaining to this job audit. Populate the applicable process tables with the actual process results/conditions at the time this part was processed (Columns H and I in Process Tables A through H).	PT A, PT C	**conforming**
4.9	Were appropriate process steps on the job router/traveler signed off? For electronic systems, a screen print is acceptable.	screen print of exit data showing each process completed	**conforming**
4.10	Were all inspection steps, as documented in the control plan, performed?	yes	**conforming**

4.11	Were steps/operations performed that were not documented in the control plan?	no	**conforming**
4.12	If additional steps were performed, were they authorized?	n/a	**n/a**
4.13	If the order was certified, did the certification accurately reflect the process performed?	no cert required for this order	**n/a**
4.14	Was the certification signed by an authorized individual?	n/a	**n/a**
4.15	Are the parts and containers free of foreign objects or contamination?	we utilize containers parts were received in, if there is contamination we turn bags inside out or dump container	**conforming**
4.16	Are packaging requirements identified?	job sheets	**conforming**
4.17	Are parts packaged to prevent mixing or damage to parts (parts packed over height of container)?	we pack as received	**conforming**
4.18	Are storage conditions sufficient to maintain part quality? (e.g., parts are stored indoors in a clean, dry environment)	yes	**conforming**
4.19	Were the parts properly identified and/or labeled before shipping?	yes	**conforming**
4.20	For the finished part, list each test and inspection requirement per customer specification.	Each part may have one or more requirements determined by the coating specification. Parts must meet each requirement. Add additional sections as needed.	
	Below is an <u>example</u> of how to fill out sections in 4.20.x	**Inspection Requirement**	**Conforming Nonconforming NA**
Example only	**Test Description:**	Corrosion Resistance	
	Test Method:	ASTM B117	
	Test frequency or quantity:	daily, 2 parts	**Conforming**
	Test Requirement:	240 hrs. no white / 1000 hours no red	
	Result: Attach evidence:	White corrosion at 168 hours, no red LAB Report 12	**Nonconforming**
	Insert audit data below this line. Add additional sections as needed.		
4.20.1	**Test Description:**		
	Test Method:	Coating weight	
	Test frequency or quantity:	1 rep panel per week	**conforming**
	Test Requirement:	800 mg/ft2 +/- 30%	
	Result: Attach evidence:	792 mg/ft2	**conforming**
4.20.2	**Test Description:**		
	Test Method:	titration records for chemical baths	
	Test frequency or quantity:	start up / 1x per shift	**conforming**

	Test Requirement:	as defined on individual titrations	
	Result: Attach evidence:	all baths within established requiremetns	**confomring**

Section 4 - Coating System Assessment Job Audit - Finished Product Review

	Job Identity: CCI188352		
	Customer: Bridgeston		
	Shop Order Number: 27241		
	Part Number: S016482		
	Part Description: Ring, outer		
	Material Substrate: Aluminum		
	Coating Requirements: 5-25 mg/m2		
	Specification Number and Revision: PS 154.1 Rev B		
Question Number	**Inspection Element**	**Identify Relevant Documents & Actual Condition (Provide Data or Values & Embed or Attach Documents)**	**Conforming Nonconforming NA**
4.1	Attach evidence that the documentation for the specific part conforms to the requirements including: • Advanced quality planning process • FMEA • Process Control Plan	FMEA and Control plan are processes specific	**conforming**
4.2	What customer specifications or requirements are used for this part? • List the specification(s) and revision(s)	PS 154.1	**conforming**
4.3	Provide evidence of receiving inspection.	lot tags issues	**conforming**
4.4	Provide the job traveler or attach a copy of this traveler showing: • Customer name • Lot number • Weight/quantity • Process instructions • Inspection requirements	we do not use traveler/ we use lot tags	**conforming**
4.5	If the lot is divided, how is the traceability maintained throughout the process?	basket number recorded and batch processed	**conforming**
4.6	Describe the method used to document each operation as being completed. Is there a sign-off with time stamp, bar code or scan, etc., after each operation?	exit data, this is a computer controled process receipe	**conforming**
4.7	Attach work instructions applicable to this part indicating proper barrel/basket mesh size or perforation (hole size), load size, appropriate rack configuration, appropriate part orientation on rack, etc.	job sheets available	**conforming**
4.8	Identify each process table pertaining to this job audit. Populate the applicable process tables with the actual process results/conditions at the time this part was processed (Columns H and I in Process Tables A through H).	PT A, PT C	**conforming**

4.9	Were appropriate process steps on the job router/traveler signed off? For electronic systems, a screen print is acceptable.	exit data available for every load	**conforming**
4.10	Were all inspection steps, as documented in the control plan, performed?	yes	**conforming**
4.11	Were steps/operations performed that were not documented in the control plan?	yes	**conforming**
4.12	If additional steps were performed, were they authorized?	n/a	**n/a**
4.13	If the order was certified, did the certification accurately reflect the process performed?	n/a	**n/a**
4.14	Was the certification signed by an authorized individual?	no cert required	**n/a**
4.15	Are the parts and containers free of foreign objects or contamination?	yes, containers have through holes	**conforming**
4.16	Are packaging requirements identified?	job sheets available	**conforming**
4.17	Are parts packaged to prevent mixing or damage to parts (parts packed over height of container)?	packed out as received	**conforming**
4.18	Are storage conditions sufficient to maintain part quality? (e.g., parts are stored indoors in a clean, dry environment)	yes	**conforming**
4.19	Were the parts properly identified and/or labeled before shipping?	yes	**conforming**
4.20	For the finished part, list each test and inspection requirement per customer specification.	Each part may have one or more requirements determined by the coating specification. Parts must meet each requirement. Add additional sections as needed.	
	Below is an <u>example</u> of how to fill out sections in 4.20.x	**Inspection Requirement**	**Conforming Nonconforming NA**
Example only	**Test Description:**	Corrosion Resistance	
	Test Method:	ASTM B117	
	Test frequency or quantity:	daily, 2 parts	**Conforming**
	Test Requirement:	240 hrs. no white / 1000 hours no red	
	Result: Attach evidence:	White corrosion at 168 hours, no red LAB Report 12	**Nonconforming**
	Insert audit data below this line. Add additional sections as needed.		
4.20.1	**Test Description:**		
	Test Method:	Coating Weight - xray (portaspec)	
	Test frequency or quantity:	sample 1x every 2 weeks	**conforming**

	Test Requirement:	5-25 mg/m2	
	Result: Attach evidence:	24 mg/m2	**conforming**
4.20.2	**Test Description:**		
	Test Method:	titration records for chemical baths	
	Test frequency or quantity:	start up / 1x per shift	**conforming**
	Test Requirement:	as defined on individual titrations	
	Result: Attach evidence:	all baths within established requiremetns	**confomring**

PROCESS TABLE A - Pretreatment (Aqueous)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

Process Line Identification:

Type of Line: Rack or Barrel

	Category/Process Steps	Type of Control		Monitoring Frequency		Observation/ Comments	Job Audit Measurements	
ITEM #		**Minimum Requirement**	**Actual Condition**	**Minimum Requirement**	**Actual Condition**	**Conforming Nonconforming NA**	**Range**	**Actual Measurements supporting time of Job Audit**
1.0	**Aqueous Cleaning Process (Alkaline or Acid)**	Both Alodine and Phos Lines						
A1.1	There shall be an incoming part assessment procedure with criteria.	Per Control Plan	Per Control Plan	Once per lot and per part change.	once per lot and container	**Conforming**	WI-123	CCI Lot # issued
A1.2	Time	Automatic / Manual	Automatic; PLC controlled	Automatic Line: Confirm set-up at the start of production and every process change. Manually verify every 3 months or after programming change or equipment maintenance. Manual Line: Continuously monitor time in each stage of process.	100%	**conforming**	30 sec - 6 mins	120 sec Alodine
2.0	**Cleaning / Descaling Solution**	Both Alodine and Phos Lines						
A2.1	Pressure for spray rinse. Agitation for immersion tanks.	Automatic / Manual	Automatic; PLC controlled	Once every 8 hours.	100%	**confomming**	pump circulation	pump circulation
A2.2	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic	Automatic; PLC controlled	Continuous monitoring by controller. Manually verify daily.	100%	**conforming**	per control plan & Process Manuals	140 deg f on both lines
A2.3	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)	N/A	Continuous monitoring by controller. Manually verify daily.	N/A	**n/A**	n/a	n/A
A2.4	Chemical Concentration (Alkaline Cleaner) (If used) Per chemical supplier recommendation such as: - free alkalinity - total alkalinity - pH - conductivity - percentage of cleaner (weight/volume or volume/volume)	Automatic / Manual	Manual	Once every 8 hours.	start up/ 1x per shift or 8 hr	**conforming**	Log-305E, Log - 306E Log-203	All within established ranges for cleaning concentration
A2.5	Chemical Concentration (Acid Cleaner) (If used) Per chemical supplier recommendation such as: - free acidity or concentration - metal contamination	Automatic / Manual	N/A	Once every 8 hours.	N/A	**n/A**	n/a	n/A
A2.6	Impurity Content Per chemical supplier recommendation such as: - acid split (oil contamination) - alkalinity ratio - iron content	Manual	N/A	Once every 8 hours.*	N/A	**n/A**	n/a	n/A
A2.7	Solution Level	Manual	Manual	Once every 8 hours.	start up/ 1x per shift or 8 hr	**conforming**	Visual	solution level covering all baskets

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Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

A2.8	Solution and tank clean out schedule is documented and followed - Desludging, coalescer, new make-up frequency, etc.	Manual	Manual	Per preventative maintenance program.	As Required	**conforming**	Visual	PM's completed per schedule
3.0	**Rinse**	Both Alodine and Phos Lines						
A3.1	Rinse Type - Identify in comment section e.g., Flowing, Counter Flowing, Spray, Stagnant, Drag-in/out.	Automatic	Automatic; PLC controlled	Once every 8 hours.	City Water, 100%, Immersion	**Conforming**		
A3.2	Water Type - Identify in comment section e.g., Municipal, Deionized (DI), Reverse Osmosis (RO).	NA	Municipal	NA	100%	**conforming**		
A3.3	Agitation type - Identify in comment section, if applicable. e.g., Mechanical (Describe), Air, Ultrasonic.	Automatic	automatic	NA	100%	**conforming**		
A3.4	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic	n/a	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**		
A3.5	Temperature (Thermocouple), if applicable.	Automatic Max SAT difference allowed +/- 5°C (10°F)	n/a	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**		
A3.6	pH, if applicable.	Manual	n/a	Once every 8 hours.*	n/a	**n/a**		
A3.7	Conductivity, if applicable.	Manual	manual	Once every 8 hours.*	start up/ 1x per shift or 8 hr	**conforming**	per appropriate rinse LOGS	per control plans
A3.8	Concentration, if applicable.	Manual	n/a	Once every 8 hours.*	n/a	**n/a**		
A3.9	Flow rate, if applicable.	Manual	n/a	Once every 8 hours.	n/a	**n/a**		
A3.10	Spray nozzle condition, if applicable.	Manual	n/a	Once every 8 hours.	n/a	**n/a**		
A3.11	Verify position of incoming water feed is near the bottom (if immersion tank)	Manual	manual	Per preventative maintenance program.	100%	**conforming**	at bottom of immersion tank	
A3.12	Tank maintenance schedule documented and followed.	Manual	manual	Per preventative maintenance program.	per PM schedule	**conforming**	Each tank has its own PM	ontime
4.0	**Acid / Neutral Pickling**							
A4.1	Concentration	Manual		Once every 8 hours.				
A4.2	Concentration of Fe, per chemical supplier.	Manual		Once per day.				
A4.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic		Continuous monitoring by controller. Manually verify daily.				
A4.4	Temperature (Thermocouple), if applicable.	Automatic Max SAT difference allowed +/- 5°C (10°F)		Continuous monitoring by controller. Manually verify daily.				
A4.5	Inhibitor (if used)	Manual		Per supplier data sheet.				
A4.6	Solution Level	Manual		Once every 8 hours.				

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Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

A4.7	Solution and tank clean out schedule is documented and followed - Desludging, coalescer, new make-up frequency, etc.	Manual		Per preventative maintenance program.				
A4.8	Rinse - See Section 3.0.							

PROCESS TABLE A - Pretreatment (Aqueous)

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Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

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If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

5.0	**Aluminum Etching**							
A5.1	Concentration	Manual		Once every 8 hours.				
A5.2	Concentrations of Al, per chemical supplier.	Manual		Once per day.				
A5.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic		Continuous monitoring by controller. Manually verify daily.				
A5.4	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)		Continuous monitoring by controller. Manually verify daily.				
A5.5	Solution and tank clean out schedule is documented and followed - Desludging, coalescer, new make-up frequency, etc.	Manual		Per preventative maintenance program.				
A5.6	Rinse - See Section 3.0.							
6.0	**Aluminum Deoxidizing**	alodine line only						
A6.1	Concentration	Manual	Manual	Once every 8 hours.	start up/ 1x per shift or 8 hr	**conforming**	per control plan & Process Manuals	LOG - 303E
A6.2	Concentrations of Al, per chemical supplier.	Manual	n/a	Once per day.	n/a	**conforming**	n/a	n/a
A6.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic	Automatic; PLC controlled	Continuous monitoring by controller. Manually verify daily.	100%	**conforming**	per TDS	LOG - 303E
A6.4	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)	n/a	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**	n/a	n/a
A6.5	Solution and tank clean out schedule is documented and followed - Desludging, coalescer, new make-up frequency, etc.	Manual	manual	Per preventative maintenance program.	As Required	**conforming**	Per appropriate PM	ontime
A6.6	Rinse - See Section 3.0.							
7.0	**Sealing Rinse (if applicable)**							
A7.1	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic		Continuous monitoring by controller. Manually verify daily.				
A7.2	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)		Continuous monitoring by controller. Manually verify daily.				
A7.3	Concentration	Manual		Once every 8 hours.				
A7.4	pH, if applicable.	Automatic / Manual		Once every 8 hours.				
A7.5	Solution Level	Manual		Once every 8 hours.				
A7.6	Solution and tank clean out schedule is documented and followed - Desludging, coalescer, new make-up frequency, etc.	Manual		Per preventative maintenance program.				

PROCESS TABLE A - Pretreatment (Aqueous)

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The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

A7.7	Rinse - See Section 3.0.							

PROCESS TABLE A - Pretreatment (Aqueous)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

8.0	**Oil / Wax (if applicable)**							
A8.1	Pressure/Agitation	Automatic		Once every 8 hours.				
A8.2	Chemical Analysis: Per chemical supplier recommendation such as: - Concentration - pH - Emulsion Stability - Viscosity - Total Dissolved Solids (TDS)	Manual		If not used at 100% concentration, every 8 hours. If used at 100% concentration, every lot change.				
A8.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic		Continuous monitoring by controller. Manually verify daily.				
A8.4	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)		Continuous monitoring by controller. Manually verify daily.				
A8.5	Solution and tank clean out schedule is documented and followed - Desludging, new make-up frequency, etc.	Manual		Per preventative maintenance program.				
9.0	**Dry-Off (If Applicable)**	Alodine and Phos Lines						
A9.1	Air temperature is monitored and controlled.	Automatic	Automatic; PLC controlled	Once every 8 hours.	start up/ 1x per shift or 8 hr	**conforming**	per control plan	as defined
A9.2	There is a procedure to ensure dryness of parts prior to subsequent coating.	Visual	visual	Every change of lot number and each container.	100%	**conforming**	WI105, WI201, WI309	conforming
10.0	**Process Equipment**							
A10.1	Process equipment shall be verified and calibrated per Process Table K. Calibrations shall be certified, posted and up to date. A system shall be used to track calibration dates of equipment. Complete the audit for these identified elements in Process Table K.							

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What internal system is used for conducting and managing calibration of all relevant equipment identified in Process Table K?	Manual - controlled calibration list w/ calendar reminders	**conforming**
Provide the document that lists all relevant equipment identified in Process Table K.	Form 111	**conforming**
How do you ensure calibrations are up to date?	Calibration date and expire date are both noted with applicable cert #	**conforming**
How do you ensure new equipment has been added to the calibration list and inactive equipment has been removed?	Reviewed annualy by Quality Manager, with plant audit	**conforming**
Are calibration labels present and up to date for listed equipment?	review of equipment used on both lines showed calibration labels	**conforming**
What is the reaction plan to any failed verification?	Follow control of nonconforming product as defined on control plan	**conforming**

PROCESS TABLE A - Pretreatment (Aqueous)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

A10.2	Barrels, baskets, process tanks, belts/conveyors, racks, fixtures and drive mechanisms shall be maintained.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
How do you inspect for the integrity of the barrels, baskets, process tanks, racks, contact points, belts/conveyors and drive mechanisms? (e.g., wear, perforations, trap points, plugged holes, door gaps, other damage) Where are the inspection results documented?	Approprate PM for tanks, baskets, hoists	**conforming**
What is your preventative maintenance program for barrels, baskets, racks, contact points, process tanks and drive mechanism?	as defined on PM schedule	**conforming**
What is the maintenance program for mechanical/chemical cleaning of barrels, baskets, racks, contact points and process tanks?	as defined on PM schedule	**conforming**
How is each basket, barrel, or rack uniquely identified for tracking purposes?	each has its own # at the top of the rack were it would not be placed in the immersion bath	**conforming**

A10.3	All filtration equipment shall be maintained. The organization shall have a preventative maintenance system that is documented and implemented.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What is the preventative maintenance program for filters?	daily by supervisor	**conforming**
How is the filter type identified during use?	n/a	**n/a**
If reusable filters are used, do they meet the supplier's recommendations?	n/a	**n/a**
If disposable filters are used, do they meet the supplier's recommendations?	yes, recommended by the designer of our lines	**conforming**
What are your criteria for filter replacement and/or cleaning?	1x daily	**conforming**
What information is used to determine the required mesh size?	as defined by the manufacture	**confomring**
How is compatibility with the process determined?	as defined by the manufacture	**conforming**
Describe the preventive maintenance program for all solution filters to include plate, filter bag and cartridge.	daily by supervisor	**conforming**
Describe the preventive maintenance program for all air filters used on ovens, dryers, chillers, blowers and fans etc.	n/a	**n/a**

A10.4	All process and equipment alarms shall be tested on a quarterly basis at a minimum. The organization shall have a preventative maintenance system that is documented and implemented.

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Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What is the preventative maintenance program where alarms are used for solution temperature, level control, environmental control, faults, etc.?	as defined on PM schedule	**conforming**
What are the alarms that are tested and their test frequency?	as defined on PM schedule	**conforming**

A10.5	Processing equipment is designed/optimized for "soft handling" of parts.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
Are chutes lined to prevent part damage?	n/a	**n/a**
What technique(s) are used to minimize drop heights?	n/a	**n/a**

A10.6	Part transfer equipment is maintained.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What is your program to assure cleanliness of belts, conveyors, chutes, vibratory tables, etc.?	n/a	**n/a**
What is your maintenance program for belts, conveyors, chutes, vibratory tables, etc.?	n/a	**n/a**

A10.7	In-process and customer containers are managed and maintained.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
How do you identify and segregate in-process containers for different processes?	We only have in-process containers … Size and material type destingueses the different lines	**conforming**
What is your maintenance program for keeping in-process containers clean and in good condition?	as defined on PM schedule	**conforming**
How do you ensure that the customer containers do not degrade the quality of the coated parts? (e.g., customer container may arrive damaged, oily, dirty)	receivng inspection	**conforming**

A10.8	Electrical system shall be maintained. Coater shall have a preventative maintenance system that is documented and implemented.	as defined on PM schedule	**conforming**

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
Describe the preventative maintenance program for rectifiers (e.g., voltage and amperage)	n/a	**n/a**
All anodes/cathodes, contacts and bussing shall be maintained. Coater shall have a preventative maintenance system that is documented and implemented.	n/a	**n/a**
Describe the preventative maintenance program including cleanliness, electrical resistance and electrical shorts.	n/a	**n/a**

PROCESS TABLE A - Pretreatment (Aqueous)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

11.0	**Test Equipment (Process Control and Finished Part Quality)**		
A11.1	Test Equipment shall be verified and calibrated per Process Table K. Calibrations shall be certified, posted and up to date. A system shall be used to track calibration dates of equipment. Complete the audit for these identified elements in Process Table K.		

Guidance	**Objective Evidence / Comments**	**Conforming Nonconforming NA**
Wet Analysis: Before use, chemicals must be checked for shelf life and/or expiration date	monthly inventory checks for expiration dates	**conforming**
pH Meter	per calibration list	**conforming**
pH Probes (must be solution compatible)	n/a	**n/a**
Laboratory Balance (Weight Scale)	per calibration list	**conforming**
Rectifier	n/a	**n/a**
Hand Held Thermometer	per calibration list	**conforming**
Temperature Controller	n/a	**n/a**
Thermocouple	n/a	**n/a**
Solution Mixer	n/a	**n/a**
Amp Meter/Volt Meter	n/a	**n/a**
Filters	per manufacure recommendation	**conforming**
Conductivity Meter	per calibration list	**conforming**
Conductivity Probes (must be solution compatible)	n/a	**n/a**
Ultrasonic Cleaner, if applicable.	n/a	**n/a**

Proceed to PT B , PT C or PT H

PROCESS TABLE B - Pretreatment (Mechanical)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

For multiple tanks that serve the same purpose copy and paste sections as needed.

Item #	Category/Process Steps	Type of Control		Monitoring Frequency		Observation/ Comments	Job Audit Measurements	
		Minimum Requirement	Actual Condition	Minimum Requirement	Actual Condition	Conforming Nonconforming NA	Range	Actual Measurements supporting time of Job Audit
1.0	**Abravise Blast Process**							
B1.2	Parts shall be clean and free of oil and grease.	Manual	manual	For batch operations per load. For integrated operations once every 8 hours.	every load	**conforming**	per inspection sheet	as noted on inspection sheet
B1.3	Load Weight is verified.	Manual / Automatic	manual	Per load.	every load	**confoming**	as defined on job sheet	as defined
B1.4	Media Size / type is appropriate for the part being processed.	Manual	manual	Per part number.	every load	**conforming**	media size is the same for all parts	n/a
B1.5	Dwell time is clearly defined.	Manual / Automatic	automatic	Per load.	every load	**conforming**	dwell time is the same for all parts	n/a
B1.6	Verify blasting force/energy is set and maintained within control limits, e.g., Amperage Draw, PSI.	Manual / Automatic	n/a	Per load.	n/a	**n/a**	n/a	n/a
B1.7	Verify abrasive media volume is sufficient.	Manual	Manual	Once every 8 hours.	Start up / 1x per day or 8 hrs	**conforming**		
B1.8	Verify dust collector efficiency/air flow is within limits.	Manual	manual	Once every 8 hours.	Start up / 1x per day or 8 hrs	**conforming**		
B1.9	Media size / life: Media size is being checked on a regular schedule to determine effective cleaning and life for product mix.	Manual / Automatic	manual	Once per week.	once per week	**conforming**	per PM	
B1.10	Part cleanliness is checked after process. Surface cleanliness check must be conducted using a chemical, e.g., copper sulfate, surface tension ink or other qualitative method.	Manual	N/A	Once every 4 hours.	n/A	**n/a**		
B1.11	If additional blasting is required, management approval is needed.	Manual / Automatic	manual	Per load.	per load	**conforming**	per rework WI / control plan	
B1.12	Surface profile is checked after process, if applicable.	Manual	N/A	Per load.	n/a	**n/a**		
2.0	**Process Equipment**							
B2.1	Process equipment shall be verified and calibrated per Process Table K. Calibrations shall be certified, posted and up to date. A system shall be used to track calibration dates of equipment. Complete the audit for these identified elements in Process Table K.							

PROCESS TABLE B - Pretreatment (Mechanical)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

For multiple tanks that serve the same purpose copy and paste sections as needed.

Guidance		Objective Evidence / Comments	Conforming Nonconforming NA
What internal system is used for conducting and managing calibration of all relevant equipment identified in Process Table K?			
Provide the document that lists all relevant equipment identified in Process Table K.			
How do you ensure calibrations are up to date?			
How do you ensure new equipment has been added to the calibration list and inactive equipment has been removed?			
Are calibration labels present and up to date for listed equipment?			
What is the reaction plan to any failed verification?			
B2.2	Barrels, belts/conveyors, racks, fixtures and drive mechanisms shall be maintained.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
How do you inspect for the integrity of the barrels, racks, belts/conveyors and drive mechanisms? (e.g., wear, perforations, trap points, plugged holes, door gaps, other damage)			
What is the maintenance program for barrels, belts/conveyors, racks, fixtures and drive mechanisms?			
How is each barrel or rack uniquely identified for tracking purposes?			
B2.3	All filtration equipment shall be maintained. The organization shall have a preventative maintenance system that is documented and implemented.		

PROCESS TABLE B - Pretreatment (Mechanical)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

For multiple tanks that serve the same purpose copy and paste sections as needed.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What is the preventative maintenance program for filters?		
How is the filter type identified during use?		
If reusable filters are used, do they meet the supplier's recommendations?		
If disposable filters are used, do they meet the supplier's recommendations?		
What are your criteria for filter replacement and/or cleaning?		
What information is used to determine the required mesh size?		
How is compatibility with the process determined?		
Describe the preventive maintenance program for all solution filters to include plate, filter bag and cartridge.		
Describe the preventive maintenance program for all air filters used on ovens, dryers, chillers, blowers and fans, etc.		
How is the dust collection system maintained? (e.g., pressure differential gages/sensors)		

B2.4	All process and equipment alarms shall be tested on a quarterly basis at a minimum. The organization shall have a preventative maintenance system that is documented and implemented.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What is the preventative maintenance program where alarms are used for environmental control, faults, etc.?		
What alarms are tested and define the test frequency?		

PROCESS TABLE B - Pretreatment (Mechanical)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

For multiple tanks that serve the same purpose copy and paste sections as needed.

B2.5	Processing equipment is designed/optimized for "soft handling" of parts.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
Are chutes lined to prevent part damage?			
What technique(s) are used to minimize drop heights/damage?			

B2.6	Part transfer equipment is maintained.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
What is your program to assure cleanliness of belts, conveyors, chutes, vibratory tables, etc.?			
What is your maintenance program for belts, conveyors, chutes, vibratory tables, etc.?			

B2.7	In-process and customer containers are managed and maintained.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
How do you identify and segregate in-process containers for different processes?			
What is your maintenance program for keeping in-process containers clean and in good condition?			
How do you ensure that the customer containers do not degrade the quality of the coated parts? (e.g., customer container may arrive damaged, oily, dirty)			

B2.8	The blasting force/energy supply system shall be maintained. (e.g., Amperage Draw, PSI.)		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
Describe the preventative maintenance program for drive motors (e.g., voltage and amperage)			

PROCESS TABLE B - Pretreatment (Mechanical)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

For multiple tanks that serve the same purpose copy and paste sections as needed.

3.0	**Test Equipment (Process Control and Finished Part Quality)**
B3.1	Test Equipment shall be verified and calibrated per Process Table K. Calibrations shall be certified, posted and up to date. A system shall be used to track calibration dates of equipment. Complete the audit for these identified elements in Process Table K.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
Wet Analysis: Before use, chemicals must be checked for shelf life and/or expiration date		
Media flow rate - amp meter		
Part dust residue test capability		
Surface profile assessment capability, if applicable		
Media fine removal capability		
Media size distribution capability - sieves/lab balance, laser		
Media pattern assessment capability		
Part dryness ceramic test media (e.g., Zirblast), if applicable		
Part cleanliness assessment - Copper sulfate solution for Hogaboom test, surface tension ink, if applicable		
Phenolpthalein solution for alkaline contamination check, if applicable		
Laboratory Balance (Weight Scale)		

Proceed to PT A, PT C or PT G

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

Process Line Identification:

Process Barrel size:

	Category/Process Steps	Type of Control		Monitoring Frequency		Observation/ Comments	Job Audit Measurements	
ITEM #		**Minimum Requirement**	**Actual Condition**	**Minimum Requirement**	**Actual Condition**	**Conforming Nonconforming NA**	**Range**	**Actual Measurements supporting time of Job Audit**
1.0	**Conversion Coating Process**	Both Alodine and Phospate						
C1.1	This audit requires the completion of either Table A and/or B.	NA		NA				
C1.2	If the pretreatment and conversion coating is not a continuous process, there shall be a part cleanliness check immediately before conversion coating. Acceptance criteria must be defined.	Manual	N/A - Continuous process	Every start of production cycle, change of lot number and each container.				
C1.3	Cycle time/Line speed setup is checked.	Automatic / Manual	automatic; PLC	For manual process, prior to start of production and every part change. For automated process, at the start of production and every process change.	start up / process change	**conforming**		
2.0	**Conditioner (If Applicable)**							
C2.1	Pressure/Agitation	Automatic		Once every 8 hours.				
C2.2	Chemical Analysis: - Concentration - pH	Automatic / Manual		For continuous operations, once every 8 hours. Otherwise, prior to start of each production cycle.				
C2.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic		Continuous monitoring by controller. Manually verify once every 8 hours.				
C2.4	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)		Continuous monitoring by controller. Manually verify daily.				
C2.5	Solution and tank clean out schedule is documented and followed - Desludging, weir, new make-up frequency, etc.	Manual		Per preventative maintenance program.				

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

3.0	**Conversion Coating Bath**							
C3.1	Pressure/Agitation	Automatic	automatic	Once every 8 hours.	start up / 1x per shift or 8 hr	**conforming**		
C3.2	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic	automatic; PLC	Continuous monitoring by controller. Manually verify once every 8 hours.	start up/ 1x per shift or 8hr	**conforming**		
C3.3	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)	n/a	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**		
C3.4	Chemical Analysis: - Phosphate: Free Acid, Total Acid, Iron Content, pH, Accelerator (as applicable) - Non-phosphate: Concentration, pH - Chromate: Concentration, pH - Non-chrome: Concentration, pH - Black Oxide: Concentration, boiling point	Automatic / Manual	manual	Once every 4 hours.	start up/ 2x per shift or every 4hr	**conforming**		All titration logs were updated to increase freq. of checks
C3.5	Fluoride Ion Concentration in zinc phosphate (if aluminum is being coated)	Automatic / Manual	n/a	Once every 4 hours.	n/a	**n/a**		
C3.6	Coating Weight/Thickness	Manual	manual	Once every 8 hours.*	2x per week or per customer request	**conforming**		
C3.7	Crystal/Grain Size, if applicable.	Manual	manual	Per customer requirement.	1x per week or at customer request	**conforming**		
C3.8	Coverage of phosphate coating is visually inspected for streaking, uniform appearance and absence of voids.	Manual	manual	Once every 8 hours.	per load	**conforming**	final inspection	
C3.9	Sludge accumulation in tank.	Manual	manual	Once per day.*	start up/ 1x per shift or 8hr	**conforming**		
C3.10	Solution and tank clean out schedule is documented and followed - Desludging, new make-up frequency, etc.	Manual	manual	Per preventative maintenance program.	per PM	**conforming**		

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

4.0	**Rinse**							
C4.1	Rinse Type - Identify in comment section e.g., Flowing, Counter Flowing, Spray, Stagnant, Drag-in/out.	Automatic	automatic, immersion	NA	100%	**conforming**		
C4.2	Water Type - Identify in comment section e.g., Municipal, Deionized (DI), Reverse Osmosis (RO).	NA	RO	NA	100%	**conforming**		
C4.3	Agitation type - Identify in comment section, if applicable. e.g., Mechanical (Describe), Air, Ultrasonic.	Automatic	aurtomatic Air	NA	100%	**conforming**		
C4.4	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic	automatic; PLC	Once every 8 hours.	100%	**conforming**		
C4.5	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)	na/	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**		
C4.6	pH, if applicable.	Manual	n/a	Once every 8 hours.*	n/a	**n/a**		
C4.7	Conductivity, if applicable.	Manual	manual	Once every 8 hours.*	start up / 1x per shift or 8 hr	**conforming**		
C4.8	Concentration, if applicable.	Manual	n/a	Once every 8 hours.*	n/a	**n/a**		
C4.9	Flow rate, if applicable.	Manual	n/a	Once every 8 hours.	n/a	**n/a**		
C4.10	Spray nozzle condition, if applicable.	Manual	n/a	Once every 8 hours.	n/a	**n/a**		
C4.11	Verify position of incoming water feed is near the bottom (if immersion tank)	Manual	manual	Per preventative maintenance program.	at bottom of tanks	**conforming**		
C4.12	Tank maintenance schedule documented and followed.	Manual	manual	Per preventative maintenance program.	PM Program	**conforming**		

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

5.0	**Sealing Rinse (if applicable)**							
C5.1	Pressure/Agitation	Automatic		Once every 8 hours.				
C5.2	Chemical Concentration	Automatic / Manual		Once every 8 hours.				
C5.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic		Once every 8 hours.				
C5.4	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)		Continuous monitoring by controller. Manually verify daily.				
C5.5	Solution and tank clean out schedule is documented and followed - Desludging, new make-up frequency, etc.	Manual		Per preventative maintenance program.				
6.0	**Oil / Wax (if applicable)**	Phospate line only						
C6.1	Pressure/Agitation	Automatic		Once every 8 hours.				
C6.2	Chemical Analysis: Per chemical supplier recommendation such as: - Concentration - pH - Emulsion Stability - Viscosity - Total Dissolved Solids (TDS)	Manual	manual	If not used at 100% concentration, every 8 hours. If used at 100% concentration, every lot change.	every lot change	**conforming**		
C6.3	Solution Temperature is monitored and controlled if required by chemical supplier's technical data sheet.	Automatic	automatic	Once every 8 hours.	star up / 1x per shift or 8 hours	**conforming**		
C6.4	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)	n/a	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**		
C6.5	Solution and tank clean out schedule is documented and followed - Desludging, new make-up frequency, etc.	Manual	manual	Per preventative maintenance program.	per PM	**conforming**		
7.0	**Dry-Off (If Applicable)**	Alodine line only						
C7.1	Air temperature is monitored and controlled.	Automatic	automatic	Once every 8 hours.	start up / 1x per shift or 8 hr	**conforming**		
C7.2	Temperature (Thermocouple)	Automatic Max SAT difference allowed +/- 5°C (10°F)	N/a	Continuous monitoring by controller. Manually verify daily.	n/a	**n/a**		
C7.3	There is a procedure to ensure dryness of parts prior to subsequent coating.	Visual	visual	Every change of lot number and each container.	part of final pack inspection	**conforming**		

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

8.0	**Process Equipment**
C8.1	Process equipment shall be verified and calibrated per Process Table K. Calibrations shall be certified, posted and up to date. A system shall be used to track calibration dates of equipment. Complete the audit for these identified elements in Process Table K.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What internal system is used for conducting and managing calibration of all relevant equipment identified in Process Table K?		
Provide the document that lists all relevant equipment identified in Process Table K.		
How do you ensure calibrations are up to date?		
How do you ensure new equipment has been added to the calibration list and inactive equipment has been removed?		
Are calibration labels present and up to date for listed equipment?		
What is the reaction plan to any failed verification?		

C8.2	Barrels, baskets, process tanks, belts/conveyors, racks, fixtures and drive mechanisms shall be maintained.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
How do you inspect for the integrity of the barrels, baskets, process tanks, racks, contact points, belts/conveyors and drive mechanisms? (e.g., wear, perforations, trap points, plugged holes, door gaps, other damage) Where are the inspection results documented?		
What is your preventative maintenance program for barrels, baskets, racks, contact points, process tanks and drive mechanism?		
What is the maintenance program for mechanical/chemical cleaning of barrels, baskets, racks, contact points and process tanks?		
How is each basket, barrel, or rack uniquely identified for tracking purposes?		

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

C8.3	All filtration equipment shall be maintained. The organization shall have a preventative maintenance system that is documented and implemented.

Guidance	Objective Evidence / Comments	Conforming Nonconforming NA
What is the preventative maintenance program for filters?		
How is the filter type identified during use?		
If reusable filters are used, do they meet the supplier's recommendations?		
If disposable filters are used, do they meet the supplier's recommendations?		
What are your criteria for filter replacement and/or cleaning?		
What information is used to determine the required mesh size?		
How is compatibility with the process determined?		
Describe the preventive maintenance program for all solution filters to include plate, filter bag and cartridge.		
Describe the preventive maintenance program for all air filters used on ovens, dryers, chillers, blowers and fans etc.		

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

C8.4	All process and equipment alarms shall be tested on a quarterly basis at a minimum. The organization shall have a preventative maintenance system that is documented and implemented.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
What is the preventative maintenance program where alarms are used for solution temperature, level control, environmental control, faults, etc.?			
What are the alarms that are tested and their test frequency?			

C8.5	Processing equipment is designed/optimized for "soft handling" of parts.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
Are chutes lined to prevent part damage?			
What technique(s) are used to minimize drop heights?			

C8.6	Part transfer equipment is maintained.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
What is your program to assure cleanliness of belts, conveyors, chutes, vibratory tables, etc.?			
What is your maintenance program for belts, conveyors, chutes, vibratory tables, etc.?			

C8.7	In-process and customer containers are managed and maintained.		
Guidance		**Objective Evidence / Comments**	**Conforming Nonconforming NA**
How do you identify and segregate in-process containers for different processes?			
What is your maintenance program for keeping in-process containers clean and in good condition?			
How do you ensure that the customer containers do not degrade the quality of the coated parts? (e.g., customer container may arrive damaged, oily, dirty)			

PROCESS TABLE C - Conversion Coatings (Phosphate, Non-phosphate, Chromate, Non-chrome, Black Oxide)

All requirements given below are subordinate to applicable customer/OEM specific requirements.

The customer may have additional requirements, e.g., inspection testing or greater frequencies. When performing the job audit, the auditor shall verify coater is conforming to customer requirements.

Columns H and I are used for the Job Audit (Section 4).
Regularly scheduled measurements (e.g., temperature, concentrations, pH) are to be entered in the appropriate row.
For sections that are not applicable mark NA in the Comments column.

***If minimum requirements are not met, provide supporting records to justify actual conditions.**
To justify reduced monitoring frequencies, a minimum of 30 consecutive measurements (data points) at stated frequencies must be documented.
If any data points at reduced monitoring frequencies are outside of control limits, then revert back to the frequencies stated under the minimum requirements.

9.0	**Test Equipment (Process Control and Finished Part Quality)**
C9.1	Test Equipment shall be verified and calibrated per Process Table K. Calibrations shall be certified, posted and up to date. A system shall be used to track calibration dates of equipment. Complete the audit for these identified elements in Process Table K.

Guidance	Objective Evidence / Comments	Conforming Non-conforming NA
Wet Analysis: Before use, chemicals must be checked for shelf life and/or expiration date		
pH Meter		
pH Probes (must be solution compatible)		
Laboratory Balance (Weight Scale)		
Hand Held Thermometer		
Paint/Solution Mixer		
Temperature Controller		
Thermocouple		
Filters		
Conductivity Meter		
Conductivity Probes (must be solution compatible)		
Lab Oven Controller		
Salt Spray Cabinet		
Ultrasonic Cleaner		
Coefficient of Friction/Torque Tension (required for fasteners)		
Blacklight (for UV tracer identification)		

Proceed to PT D, PT E, PT F, PT G or PT H