

Special Process: Coating System Assessment

Facility Name: DeKalb Metal Finishing			
Address: 625 West 15th Street / PO Box 70 Auburn, IN 46706			
Phone Number:	260-925-1820	Type(s) of Plating Processing at this Facility:	
Fax Number:	260-925-5258	Process Table A	
Number of Plating Employees at this Facility:	41	Aqueous Cleaning	No
Captive Plater (Y/N):	No	Process Table B	
Commercial Plater (Y/N):	Yes	Mechanical Cleaning	No
Date of Assessment:	1-Jan-2012	Process Table C	
Date of Previous Assessment:	1-Jan-2011	Phosphating	No
		Process Table D	
		Powder Coating	No
		Process Table E	
		Electrocoat	No
		Process Table F	
		Spray	No
		Process Table G	
		Dip/Spin	No
		Process Table H	
		Autophoretic	Yes
		Process Table I	
		Convective Cure	No
		Process Table J	
		Equipment	No

Current Quality Certification(s):	ISO/TS 16949:2009
Date of Re-assessment (if necessary):	N/A

Personnel Contacted:			
Name:	Title:	Phone:	Email:
Dave Houser	Plant Manager	260-925-1820 Ext.16	dhouser@dekalbmetal.com
Paul Fry	Lab Manager	260-925-1820 Ext.15	pfry@dekalbmetal.com
Matt Morris	Quality Manager	260-925-1820 Ext.14	mmorris@dekalbmetal.com

Auditors/Assessors:			
Name:	Company:	Phone:	Email:
Matt Morris	DeKalb Metal Finishing	260-925-1820 Ext.14	mmorris@dekalbmetal.com
Ian Coyle	I C Quality Inc	937-266-8986	coyleis@aol.com

Number of "Not Satisfactory" Findings:	0
Number of "Needs Immediate Action" Findings:	0

Number of "Fail" Findings in the Job Audit(s):	0
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Special Process: Coating System Assessment (General Facility Overview)

				Assessment			
Question Number	Question	Requirements and Guidance	Objective Evidence	N/A	Satisfactory	Not Satisfactory	Needs Immediate Action
Section 1 - Management Responsibility and Quality Planning							
1.1	Is there a dedicated and qualified coating person on-site?	To ensure readily available expertise, there shall be a dedicated and qualified coating person on the 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 chemical and coating knowledge. The qualifications shall include a minimum of 5 years experience in coating operation or a combination of a minimum of 5 years of formal chemical education and coating experience.	DeKalb Metal Finishing's Lab Manager has more than 20 years of experience in the plating/surface finishing industry. The Job Description for the position of Lab Manager reflects this requirement.		X		
1.2	Does the coater perform advanced quality planning?	The organization shall incorporate a documented advanced quality planning procedure. 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 coater shall contact the customer when clarification of process changes is required. This clarification of process changes shall be documented.	DeKalb Metal Finishing uses the AIAG manual as a reference for conducting APQP's. In addition, we utilize Procedure 37 to further define our APQP policy. Feasibility studies are done for each part and are maintained both in hard copy and electronic format.		X		

1.3	Are the coater's FMEA's up to date and reflecting current processing?	The organization shall incorporate the use of a documented Failure Mode and Effects Analysis (FMEA) procedure 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. In any case, they shall address all process steps from part receipt to part shipment and all key coating process parameters as defined by the organization. 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.	DeKalb Metal Finishing uses the AIAG manual as a reference for conducting FMEA's. In addition, we utilize Procedure 37 to further define our FMEA policy. FMEAs are process driven and have been created for each process line (i.e. line 1, line 2, etc.).		X		
1.4	Are finish process control plans up to date and reflecting current processing?	The organization shall incorporate the use of a documented Control Plan procedure 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 and written for each process. In any case, they shall address all process steps from part receipt to part shipment and identify all equipment used and all key coating process parameters as defined by the organization. A cross-functional team, including a production operator, 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. Sample sizes and frequencies for evaluation of process and product characteristics shall also be addressed consistent with the minimum requirements listed in the Process Tables.	DeKalb Metal Finishing uses the AIAG manual as a reference for conducting Control Plans. In addition, we utilize Procedure 35, to further define our Control Plan policy. Control Plans are created electronically and are directly linked to our lab controls in order to ensure that changes to the control plan are immediately communicated to all affected parties.		X		

1.5	<p>Are all coating related and referenced specifications current and available? For example: SAE, AIAG, ASTM, General Motors, Ford, and DaimlerChrysler.</p>	<p>To ensure all customer requirements are both understood and satisfied, the organization shall have all related coating and customer referenced standards and specifications available for use and a method to ensure that they are current. Such standards and specifications include, but are not limited to, those relevant documents published by SAE, AIAG, ASTM, General Motors, Ford, and DaimlerChrysler. 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.</p>	<p>Yes, these documents are sent to us by our customers. Additionally, we subscribe to a service that notifies us when specifications are updated. All documents are controlled electronically in our document management software.</p>		X		
1.6	<p>Is there a written process specification for all active processes?</p>	<p>The coater shall have written process specifications for all active processes and identify all steps of the process including relevant operating parameters. Examples of operating parameters include process temperatures, cycle times, load rates, rectifier settings, etc. Such parameters shall not only be defined, they shall have operating tolerances as defined by the organization in order to maintain process control. All active processes should have a written process specification. These process specifications may take the form of work instructions, job card, computer-based recipes, or other similar documents.</p>	<p>Job Setup Instructions are in place for each part we produce. These instructions include recommended cycle times, recommended rectifier settings, pieces per rack, racks per frame, required engineering specification, color, thickness requirements, racking requirements, packaging requirements, and other special requirements, as defined by each customer.</p>		X		

1.7	Has a valid product capability study been performed initially and after process change?	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 rebuild of any equipment. The organization shall define what constitutes a major rebuild. Initial product capability studies shall be conducted for all coating processes per line as defined in scope of work and in accordance with customer requirements. Capability study techniques shall be appropriate for the coating product characteristics, e.g., coating thickness, corrosion resistance, etc.. Any specific customer requirements shall be met. In the absence of customer requirements, the organization shall establish acceptable ranges for measures of capability. An action plan shall exist to address the steps to be followed in case capability indices fall outside customer requirements or established ranges.	Product capability studies are performed annually by testing parts and panels against the most stringent specifications we are required to meet. Tested characteristics include corrosion resistance and coating thickness. Where applicable, adhesion, nickel content and other customer specified requirements are also tested. Additionally, capability studies are performed after a major rebuild of the line (replacing the head).		X		
1.8	Does the coater collect and analyze data over time, and react to this data?	The analysis of products and processes over time can yield vital information for defect prevention efforts. The organization shall have a system to collect, analyze, and react to product or process data over time. Methods of analysis shall include ongoing trend or historical data analysis of special product or process parameters. The organization shall determine which parameters to include in such analysis.	DeKalb Metal Finishing uses an electronic system for gathering, storing, and analyzing most types of data. This data is analyzed on an ongoing basis to make decisions on lab, production and quality management.		X		
1.9	Are internal assessments being completed on an annual basis, at a minimum, incorporating AIAG CSA?	The organization shall conduct internal assessments on an annual basis, at a minimum, using the AIAG CSA. Concerns shall be addressed in a timely manner.			X		

1.10	Is there a system in place to authorize reprocessing and is it documented?	The quality management system shall include a documented process for reprocessing that shall include authorization from 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 new processing control sheet issued by qualified technical personnel denoting the necessary coating modifications. Records shall clearly indicate when and how any material has been reprocessed. The Quality Manager or a designee shall authorize the release of reprocessed product.	DeKalb Metal Finishing utilizes Procedure 40 to manage the reprocessing. Referenced documents include Procedure 29 and Job Setup Instructions. Documentation is managed and stored electronically.		X		
1.11	Does the Quality Department 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. A disciplined problem-solving approach shall be used.	DeKalb Metal Finishing utilizes an electronic system for recording and managing customer complaints, internal rejects, and external rejects.		X		
1.12	Is there a continual improvement plan applicable to each process defined in the scope of the assessment?	The coater shall define a process for continual improvement for each coating process identified in the scope of the CSA. The process shall be designed to bring about continual improvement in quality and productivity. Identified actions shall be prioritized and shall include timing (estimated completion dates). The organization shall show evidence of program effectiveness.	DeKalb Metal Finishing has a three tier (Red, Yellow, Green) process management system for controlling the plating process and measuring process improvement. This system is monitored as part of management review for effectiveness verification.		X		
1.13	Does the Quality Manager or designee authorize the disposition of material from quarantine status?	The Quality Manager or designee is responsible for authorizing and documenting appropriate personnel to disposition quarantine material.	The plant manager, in conjunction with the quality manager will determine the disposition of quarantined material.		X		

1.14	Are there procedures or work instructions available to coating personnel that define the coating process?	There shall be procedures or work instructions available to coating personnel covering the coating process. These procedures or work instructions shall include methods of addressing potential emergencies (such as power failure), equipment start-up, equipment shut-down, product segregation (See 2.8), product inspection, and general operating procedures. These procedures or work instructions shall be accessible to shop floor personnel.	Procedures, work instructions and other documentation are made available to all personnel through our electronic Document Management software. Specific documents include Procedure 08 (Contingency Plan), Procedure 19 (Inspection and Testing), DMFW1112 (Plant Startup/Shutdown), DMFW1071 (Line 1 Startup), DMFW1072 (Line 1 Shutdown), DMFW1073 (Line 2 Startup), DMFW1074 (Line 2 Shutdown), DMFW1075 (Line 3 Startup), DMFW1076 (Line 3 Shutdown), DMFW1077 (Line 4 Startup), DMFW1078 (Line 4 Shutdown)		X		
1.15	Is management providing employee training for coating?	The organization shall provide employee training for all coating 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 assessment of the effectiveness of the training. Management shall define the qualification requirements for each function, and ongoing or follow-up training shall also be addressed.	DeKalb Metal Finishing educates employees on plating operations utilizing Program 1000 and Program 2000. Documented evidence is maintained electronically in our training software.		X		
1.16	Is there a responsibility matrix to ensure that all key management and supervisory functions are performed by qualified personnel?	The organization shall maintain a responsibility matrix identifying all key management and supervisory functions and the qualified personnel who may perform such functions. It shall identify both primary and secondary (backup) personnel for the key functions (as defined by the organization). This matrix shall be readily available to management at all times.	DeKalb Metal Finishing utilizes a Responsibility Matrix (DMF301) to ensure that all key management and supervisory functions are performed by qualified personnel.		X		

1.17	Is there a preventive maintenance program? Is maintenance data being utilized to form a predictive maintenance program?	The organization shall have a documented preventive maintenance program for key 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 predictive maintenance program.	DeKalb Metal Finishing utilizes a spreadsheet based maintenance log to manage its preventive / predictive maintenance program (DMF261).		X		
1.18	Has the coater developed a critical spare part list, and are the parts available to minimize production disruptions?	The coater shall develop and maintain a critical spare parts list and shall ensure the availability of such parts to minimize production disruptions.	The critical spare parts list is included this in the maintenance log (DMF261).		X		
Section 2 - Floor and Material Handling Responsibility							
2.1	Does the facility ensure that the data entered in the receiving system matches the information on the customer's shipping documents?	Documented processes and evidence of compliance shall exist, e.g., shop travelers, work orders, etc. The facility shall have a detailed process in place to resolve receiving discrepancies.	DeKalb Metal Finishings receiving document (DMF135 and DMF250) are checked against customers incoming paperwork.		X		
2.2	Is product clearly identified and staged throughout the coating process?	Procedures for part and container identification help to avoid incorrect processing or mixing of lots. Appropriate location and staging within the facility also help to ensure that orders are not shipped until all required operations are performed. Customer product shall be clearly identified and staged throughout the coating process. Non-coated, in-process, and finished product shall be properly segregated and identified. All material shall be staged in a dedicated and clearly defined area.	Customer product is typically identified by the customer on the packaging. Additionally, DeKalb Metal Finishing labels the product during the receiving process. Once the plating process is completed, plated parts are moved to the warehouse where they are placed with "finished goods".		X		
2.3	Is lot traceability and integrity maintained throughout all processes?	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.	DeKalb Metal Finishing utilizes DMF135, DMF250 and Trace Tags to maintain lot integrity throughout all processes.		X		

2.4	Are procedures adequate to prevent movement of non-conforming product into the production system?	The control of suspect or non-conforming product is necessary to prevent inadvertent shipment or contamination of other lots. Procedures shall be adequate to prevent movement of non-conforming product into the production system. Procedures shall exist addressing proper disposition, product identification and tracking of material flow in and out of hold area. Non-conforming hold area shall be clearly designated to maintain segregation of such material.	DeKalb Metal Finishing utilizes Procedure 29 to manage the integrity of the non-conforming / hold area to ensure segregation of such material.		X		
2.5	Is there a system to identify trap points in the entire process to reduce risk of mixed parts (inappropriate, unfinished or improperly coated parts)?	The coater shall have documented procedures to identify and monitor trap points for each process/equipment. Monitoring of potential trap points shall occur for every part changeover.	DeKalb Metal Finishing has identified trap points and posted these findings on signage located throughout the plant.		X		
2.6	Are containers free of inappropriate material?	Containers handling customer product shall be free of inappropriate material. After emptying and before re-using containers, containers shall be inspected to ensure that all parts and inappropriate material have been removed. The source of inappropriate material shall be identified and addressed. This is to ensure that no nonconforming coated parts or inappropriate material contaminate the finished lot.	DeKalb Metal Finishing uses customer supplied containers.		X		
2.7	Is part loading specified, documented and controlled?	Loading parameters shall be specified, documented and controlled. Examples include parts per rack and load size. Refer to Process Tables for frequency of checks.	DeKalb Metal Finishing utilizes Job Setup Instructions (DMF147) to specify loading parameters. These documents are controlled electronically.		X		
2.8	Are operators trained in material handling, containment action and product segregation in the event of an equipment emergency including power failure?	Unplanned or emergency downtime greatly raises the risk of improper processing. Operators shall be trained in material handling, containment action, and product segregation in the event of an equipment emergency including power failure. Training shall be documented. Work instructions specifically addressing potential types of equipment emergencies and failures shall be accessible to and understood by equipment operators. These instructions shall address containment/reaction plans related to all elements of the process. Evidence shall exist showing disposition and traceability of affected product.	DeKalb Metal Finishing trains operators on material handling, containment, and product segregation. This training is verified through the use of our procedure quiz (DMF268).		X		

2.9	Is the handling, storage and packaging adequate to preserve product quality?	The coater's loading/unloading systems, in-process handling and shipping process shall be assessed for risk of part damage or other quality concerns.	DeKalb Metal Finishing utilizes Procedure 18 to ensure preservation of product.		X		
2.10	Are plant cleanliness, housekeeping, environmental and working conditions conducive to control and improved quality?	Plant cleanliness, housekeeping, environmental, and working conditions shall be conducive to controlling and improving quality. The coater should evaluate such conditions and their effect on quality. A housekeeping policy shall be clearly defined and executed. The facility shall be reviewed for the following items: loose parts on floor; spillage around tanks; overall plant lighting; fumes etc.	DeKalb Metal Finishing utilizes Procedure 09, DMF194, and DMF253 to manage facility cleanliness. Procedure 09 and DMF194 manage general plant cleanliness while DMF253 relates to building maintenance.		X		
2.11	Are process control parameters monitored per frequencies specified in Process Tables?	Process control parameters shall be monitored per frequencies specified in Process Tables. Computer monitoring equipment with alarms and alarm logs satisfy the verification requirement. A designated floor person shall verify the process parameters, e.g., by initialing a strip chart or data log.	Process parameters are created, monitored, and logged electronically and are directly linked to the control plans. This ensures that changes made to the control plan are communicated to all affected parties immediately.		X		
2.12	Are out of control/specification parameters reviewed and reacted to?	There are documented reaction plans to both out of control and out of tolerance process parameters. There is documented evidence that reaction plans are followed.	Control points are identified and reviewed electronically. When a control point falls outside the specified range, affected parties are electronically notified and action is taken to ensure the control point is restored to appropriate levels.		X		
2.13	Are In-Process / Final Test Frequencies performed as specified in Process Tables?	In-Process / Final Test Frequencies shall be performed as specified in Process Tables. Refer to Process Tables	In-process and/or final testing is done in accordance with the process tables. The resulting data is stored electronically.		X		
2.14	Is product test equipment verified?	Test equipment shall be verified/calibrated per applicable customer specific standard or per an applicable consensus standard, e.g., ASTM, SAE, ISO, NIST, etc. Verification/calibration results shall be internally reviewed, approved and documented. Refer to Process Tables for frequency of checks.	DeKalb Metal Finishing utilizes gage calibration software to log and monitor calibrations and MSA studies. The frequency of such testing is set per gage and is derived from past calibration history, frequency of use, and specified requirements (i.e. customer, CQI-11) .		X		