

ARDEKIN PRECISION LLC.

QUALITY ASSURANCE MANUAL

In accordance with
SAE AS9100 B

All printed copies of this manual are for reference only. The official, controlled copy is the change-controlled electronic file located on the Ardekin Precision network within the Quality directory.

Approvals:	Date:
Richard Opengo, DQR Manager	June 1, 2009
Deborah A. Gruszczki-Randall, President	June 1, 2009



Document:

Quality Assurance Manual

Rev. A

Page 1

NOTE: The contents of this document are proprietary to Ardekin Precision, LLC, and shall not be disclosed, disseminated, copied, duplicated, or used except for purposes authorized by contract or otherwise expressly authorized in writing by Ardekin Precision

REVISIONS:

Date	Revision	Section	Description
2/28/09	Initial Release	All	Revised Manual to update name change, personnel, responsibilities, mission statement, quality policy, organizational structure
6/01/09	A Approved: DRandall	4.2.2 Sub b. 5.6.1 6.3 All 7.5.1.2 7.6 8.2.1	Second para. Sentence implied that “jigs and fixtures are produced for small-run production orders”. Add Training Records and Customer Satisfaction procedures Revise Management Review meeting to “at least annually” Third para. Building maintenance is performed by the Landlord All references to “Shop Load Report” should be “Shop Load Report” Add President and DQR Manager have authority Add Process Engineer and DQR Manager have authority Add metric identification statement to end of para



Document:
Quality Assurance Manual

Rev. A

Page 2

NOTE: The contents of this document are proprietary to Ardekin Precision, LLC, and shall not be disclosed, disseminated, copied, duplicated, or used except for purposes authorized by contract or otherwise expressly authorized in writing by Ardekin Precision

Table of Contents

Section 4	Quality Management System.....	4
4.1	General Requirements	4
4.2	Documentation Requirements.....	5
4.2.1	General	5
4.2.2	Quality Manual	5
4.2.3	Control of Documents	6
4.2.4	Control of Records	7
4.3	Configuration Management	7
Section 5	Management Responsibility	8
5.1	Management Commitment.....	8
5.2	Customer Focus	8
5.3	Quality Policy.....	8
5.4	Planning.....	9
5.4.1	Quality Objectives.....	9
5.4.2	Quality Management System Planning.....	9
5.5	Responsibility, Authority and Communication	10
5.5.1	Responsibility and Authority	10
5.5.2	Management Representative	10
5.5.3	Internal Communication.....	10
5.6	Management Review	11
5.6.1	General	11
5.6.2	Review Input	11
5.6.3	Review Output.....	11
Section 6	Resource Management.....	12
6.1	Provision of Resources.....	12
6.2	Human Resources	12
6.2.1	General	12
6.2.2	Competence, Awareness and Training	12
6.3	Infrastructure	13
6.4	Work Environment.....	13
Section 7	Product Realization.....	14



Document:

Quality Assurance Manual

Rev. A

Page 3

7.1	Planning of Product Realization	14
7.2	Customer-Related Processes	15
7.2.1	Determination of Product Requirements	15
7.2.2	Review of Requirements Related to the Product.....	15
7.2.3	Customer Communication	16
7.3	Design and Development.....	16
7.4	Purchasing	17
7.4.1	Purchasing Process	17
7.4.2	Purchasing Information.....	18
7.4.3	Verification of Purchased Product	18
7.5	Production and Service Provision.....	20
7.5.1	Control of Production and Service Provision.....	20
7.5.2	Validation of Processes for Production and Service Provision	21
7.5.3	Identification and Traceability	22
7.5.4	Customer Property	23
7.5.5	Preservation of Product	23
7.6	Control of Monitoring and Measuring Devices.....	24
Section 8	Measurement, Analysis and Improvement	26
8.1	General	26
8.2	Monitoring and Measurement.....	26
8.2.1	Customer Satisfaction.....	26
8.2.2	Internal Audit	27
8.2.3	Monitoring and Measurement of Processes	28
8.2.4	Monitoring and Measurement of Product	28
8.3	Control of Nonconforming Product.....	29
8.4	Analysis of Data.....	30
8.5	Improvement.....	31
8.5.1	Continual Improvement.....	31
8.5.2	Corrective Action	31
8.5.3	Preventive Action	32
Appendix A	Process Flowchart	34
Appendix B	Quality Policy and Quality Objectives.....	37
Appendix C	Organization Chart	38



Document:

Quality Assurance Manual

Rev. A

Page 4

4.0 Quality Management System

4.1 General Requirements

Ardekin Precision has an established, documented, and maintains a quality management system and continually improves its effectiveness in accordance with the requirements of the AS9100 International Standard.

Ardekin Precision:

- a. Identifies the processes needed for the quality management system and their application throughout the organization (see Process Flowcharts in Appendix A), including processes for management activities, resource allocation, production and measurement of the products and processes
- b. Determines the sequence and interaction of these processes, which is defined in the Process Flowchart in Appendix A and throughout the Quality Manual and associated procedures.
- c. Determines what steps are needed to ensure that both the operation and control of these processes are effective and specifies these steps in the Quality Manual, associated procedures and other documents available to provide instruction on how to carry out the processes.
- d. Ensures availability of resources and information necessary to support the operation and monitoring of these processes through daily interactions and more formal management reviews of the quality management system.
- e. Monitors, measures and analyzes these processes as determined necessary by the company management when specific controls are defined through the Quality Manual, associated procedures, or other written or verbal instructions.
- f. Implements actions necessary to achieve planned results and continual improvement of these processes, through the Management Review and Internal Audit processes , Corrective and Preventive Action processes, and interactions with customers to evaluate their satisfaction with the products and services provided.

When processes that may affect product conformity are outsourced, e.g., heat treating, grinding, plating, EDM, splines and calibration of measuring standards, the selection and evaluation of suppliers of these processes is managed in such a way as to ensure that these processes meet specified requirements (see 7.4.1, Purchasing Process).

This may include, as appropriate: monitoring the supplier quality performance, and specifying to the supplier what inspection, testing or other records are necessary to demonstrate product or process conformity, e.g. Certificate of Calibration, certification of processes and materials.



Document:

Quality Assurance Manual

Rev. A

Page 5

4.2 Documentation Requirements

4.2.1 General

The quality management system documentation includes:

- a. Documented statements of a quality policy and quality objectives;
- b. A quality manual;
- c. Documented procedures required by AS9100;
- d. Documents needed by the organization to ensure the effective planning, operation and control of its processes. These include, but are not limited to: routings, process sheets, drawings, procedures and work instructions, specifications, production schedule, checklists, or training manuals that support the quality system;
- e. Records required by AS9100 and our documented procedures;
- f. Quality management system requirements that are imposed by regulatory authorities, as they apply to Ardekin Precision and its customer requirements.

Documentation may be electronic or paper. The appropriate format for the documentation is determined by the management and depends on how the documentation needs to be used and controlled.

All quality management system documentation is available to relevant personnel as described in the *Control of Documents Procedure*. Personnel are informed of procedures that are pertinent to their jobs and are expected to follow all relevant procedures. Customers and regulatory authorities are provided access to quality management system documentation, when necessary.

4.2.2 Quality Manual

The management of Ardekin Precision has established and maintains a quality manual where the scope and exclusion include:

Machining of aerospace and non-aerospace parts, tooling and fixturing, unique-lot and small-run production orders and prototypes, using high-precision, CNC and manually-operated machines.

- a. The following are exclusions from this Quality Manual and the overall quality management system:
 - Exclusion: AS9100 Section 7.3, Design and Development, including all subsections.
Justification: Ardekin Precision does not design or develop products. Engineering activities are limited to developing processes and methods and means of production to meet customer specifications or industry-specified standards.



Document:

Quality Assurance Manual

Rev. A

Page 6

- Exclusion: AS9100 Section 7.5.1f where it applies to post delivery activities.

Justification: Ardekin Precision products do not require installation at a customer facility and servicing of our products is not performed at the customer's facility by Ardekin Precision after our customers receive products.

- b. The required procedures established for the quality management system are:

- 4.2.3 – Control of Documents
- 4.2.4 – Control of Records
- 6.2.2 – Training Records
- 8.2.1 – Customer Satisfaction
- 8.2.2 – Internal Auditing
- 8.3 – Control of Nonconforming Product
- 8.5.2 – Corrective Action
- 8.5.3 – Preventive Action.

Additional procedures and work instructions are documented as necessary to maintain control of the quality management system and to ensure manufacture of product that meets specified requirements. Specifically, in addition to the required procedures listed above, the following procedures are referenced in this quality manual for this purpose:

- 5.6 – Management Review
- 7.2 – Quoting and Order Processing
- 7.4.1 – Supplier Selection and Evaluation
- 8.2.4 – Monitoring and Measurement of Product (which also includes 7.4.3, Verification of Purchased Product).

- c. A description of the interaction between the processes of the quality management system is documented in the Process Flowchart (see Appendix A), as well as throughout this quality manual and the procedures identified above.

4.2.3 Control of Documents

The *Control of Documents Procedure* is established to define the control needed for documents that are required by the quality management system. This procedure defines the process for document approval and document changes; for making documents available to employees who need them; for managing documents that are provided by external sources (from customers, suppliers or technical data sources); and for maintaining old versions of documents that need to be kept for reference purposes.

Document changes initiated by Ardekin Precision customers are coordinated and reviewed by the President to determine the need for changes to internal documents. Communication of all internal document changes to the customer and/or regulatory authorities is coordinated by the President as required by contractual agreement or regulatory requirements.



Document:

Quality Assurance Manual

Rev. A

Page 7

Records are a special type of document and are controlled according to the requirements given in 4.2.4 below.

4.2.4 Control of Records

Records are established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records remain legible, readily identifiable and retrievable. The *Control of Records Procedure* is established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.

All quality records are documented in ink or other permanent marking.

Records are available for review by the customer and/or regulatory as required by contractual agreement or regulatory requirements.

In addition, the Control of Records Procedure defines the method of control for records created and/or retained by suppliers.

4.3 Configuration Management

Configuration management is maintained as required by customers and regulatory authorities. This control typically consists of maintaining specific records to provide traceability to raw material and components that make up the product as produced by Ardekin Precision. See Control of Documents Procedure.

5 Management Responsibility

5.1 Management Commitment

Management provides evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness by:

- a. Communicating to the organization the importance of meeting customer, as well as, statutory and regulatory requirements, including appropriate laws and mandates that apply to this industry,
- b. Establishing the quality policy,
- c. Ensuring that quality objectives are established,
- d. Conducting management reviews, and
- e. Ensuring the availability of resources.

5.2 Customer Focus

Management ensures that customer requirements are determined and are met with the aim of enhancing customer satisfaction. In particular, determination of customer requirements, covered in section 7.2, Customer Related Processes, describes the use of regular interaction with customers to understand their product needs and their satisfaction with existing products. Methods for evaluation and assessment of customer satisfaction are covered in section 8.2.1, Customer Satisfaction, including responsiveness to customer concerns as soon as they are identified.

5.3 Quality Policy

Management ensures that the quality policy (see Appendix B):

- a. Is appropriate to the purpose of Ardekin Precision,
- b. Includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system,
- c. Provides a framework for establishing and reviewing quality objectives,
- d. Is posted throughout the facility and its meaning is discussed with individual employees, and
- e. Is reviewed for continuing suitability during the Management Review process.

5.4 Planning

5.4.1 Quality Objectives

Quality objectives are established by management to implement the quality policy, to meet requirements for products and processes, and to improve the quality management system and quality performance. Quality objectives define the direction and priorities for meeting customer expectations and continual improvement of business processes. These objectives set specific, measurable targets for improving operational performance to ensure product conformity and customer satisfaction. (see Appendix B).

Quality objectives are evaluated and assessed as part of the Management Review process. When quality objectives are not met, actions are defined through the Management Review meetings to help the company achieve its objectives.



Document:

Quality Assurance Manual

Rev. A

Page 9

5.4.2 Quality Management System Planning

The purpose of the quality management system is:

- a. To achieve the quality policy;
- b. To ensure and demonstrate our ability to consistently provide product that meets customer requirements;
- c. To ensure high level of customer satisfaction;
- d. To facilitate continual improvement; and
- e. To comply with requirements of AS9100 standard.

Management ensures that:

- a. Quality management system processes are planned to make certain that the system is appropriate, effective and efficient.
- b. The integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.
- c. Significant changes to the company, such as new equipment or facilities, increase/decrease in personnel, or changes in product offerings are discussed to determine whether changes are needed to the quality management system.

This includes the use of methods such as resource planning to determine accurate delivery schedules when evaluating new orders and through regular Production meetings, and the management review process to evaluate the status of the quality management system and determine needs for improvement.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

Management ensures that responsibilities and authorities are defined and communicated within the organization. This is accomplished through the use of function descriptions and requirements that indicate the tasks to be performed by employees in each function, as well as, the organization chart (see Appendix C) that indicates a hierarchy of authority.

Additionally, employees may receive verbal communication from management of the expectations for the responsibilities they are to fulfill.

5.5.2 Management Representative

As Management Representative, the President, has the responsibility and authority, irrespective of other responsibilities, to:



Document:

Quality Assurance Manual

Rev. A

Page 10

- a. Ensure that processes needed for the quality management system are established, implemented and maintained,
- b. Report on the performance of the quality management system and any need for improvement,
- c. Ensure the promotion of awareness of customer requirements throughout the organization, and
- d. Resolve matters pertaining to quality.

5.5.3 Internal Communication

Management ensures that appropriate communication processes are established within the organization and that communication takes place regarding the effectiveness of the quality management system.

Based on the number of employees within Ardekin Precision, most internal communication is handled verbally and on an individual basis, typically by management. Posted memos and employee meetings are more formal mechanisms of this communication process.

The President communicates to production staff on items such as: need for overtime work, salary increases, customer requirements, machine operation instructions, rework instructions, etc. The President communicates to the Office Manager on issues, such as: job completion status, customer due date requirements and schedule changes, among other items specific to this function.

Schedule and production priority changes, as well as, identifying causes and solutions for quality problems are the most critical time for internal communication and management makes certain this is completed in the most effective way for the issue being communicated.

5.6 Management Review

5.6.1 General

Management reviews the organization's quality management system at least annually to ensure its continuing suitability, adequacy and effectiveness. This review includes assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives, as detailed in the *Management Review Procedure*.



Document:

Quality Assurance Manual

Rev. A

Page 11

Records from management review are maintained using the Management Review Agenda/Minutes form.

5.6.2 Review Input

The input to management review includes information on:

- a. Follow-up actions from previous management reviews,
- b. Process performance and product conformity,
- c. Results of audits,
- d. Status of preventive and corrective actions,
- e. Customer feedback,
- f. Resource and training needs,
- g. Supplier evaluations,
- h. Recommendations for improvement, and
- i. Changes that could affect the quality management system.

5.6.3 Review Output

The output of management review includes any decisions and actions related to:

- a. Improvement of the effectiveness of the quality management system and its processes,
- b. Improvement of product related to customer requirements, and
- c. Resource needs to accomplish the identified actions.

6 Resource Management

7

6.1 Provision of Resources

The management of Ardekin Precision determines and provides the resources needed:

- a. To implement and maintain the quality management system;
- b. To continually improve its effectiveness, and
- c. To enhance customer satisfaction by meeting customer requirements.

Determination of resource requirements is handled by the President whenever an immediate need arises. This might include the need to work overtime hours to meet customer requirements. Overall resource needs, based on planned changes that are determined through performance measurement and analysis, are recorded as part of Management Review.

6.2 Human Resources



Document:

Quality Assurance Manual

Rev. A

Page 12

6.2.1 General

Personnel performing work affecting product quality are competent on the basis of appropriate training, skills and experience, as defined in the Position Requirements for each function.

6.2.2 Competence, Awareness and Training

The management of Ardekin Precision:

- a. Identifies the necessary competence and tasks for personnel performing work affecting product quality in Position Requirements,
- b. Provides training (usually on-the-job) or takes other actions to satisfy these needs when an employee doesn't have all the necessary qualifications to perform their job,
- c. Evaluates the effectiveness of training provided, usually through on-the-job follow-up, annual performance reviews, and Action Requests for product nonconformances,
- d. Ensures that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives and quality policy, and
- e. Maintains Employee Training Records of training and qualifications, as well as, verification of training effectiveness. Employees hired prior to 12/1/04 are considered competent and trained to carry out their required tasks. Training records for these employees contain information on training and certificates received after 12/1/04, as well as verification of training effectiveness. Training that was obtained prior to 12/1/04 may be identified for record-keeping purposes, but will not indicate verification of effectiveness.
- f. Eye examinations, including visual acuity and color vision, as applicable, are to be administered:
 - To all individuals performing visual inspection.
 - By a medically qualified/trained person.
 - Intervals shall not exceed one year.
 - Records shall be retained for each individual.

Individuals performing visual inspection (i.e. calibration, non-weld, in-process, layout, dimensional) shall have the following vision in at least one eye, either corrected or uncorrected:

- Near Vision: Snellen 14/18 or better (20/25 or better), Jaeger Type 2 at 14 inches or greater, Ortho-Rater 8 or equivalent.
- Color Vision: Must be able to distinguish and differentiate between the colors used in the method for which the certification is required, process being performed or inspection activity. Testing for color vision is required one time only.



Document:

Quality Assurance Manual

Rev. A

Page 13

6.3 Infrastructure

The management of Ardekin Precision determines, provides and maintains the infrastructure needed to achieve conformity to product requirements. Infrastructure includes capital equipment used in the production of customer product, fixturing and tooling; and the facility, and associated heating, cooling and lighting systems of the facility, that house the capital equipment.

Planning for new or modified infrastructure and facilities is usually conducted in conjunction with product or process changes or additional capacity needs. Management is responsible for identifying the need to acquire new, or modify existing, infrastructure and facilities, as well as determining the necessary requirements for the additions or modifications. These considerations will be recorded as part of Management Review.

Maintenance of buildings and facilities is performed by the Landlord. This includes necessary maintenance of lighting systems, air conditioning and heating systems, and grounds. Repairs of buildings and other such facilities are contracted as needed, when internal personnel are not qualified to perform the repairs.

Process equipment is regularly maintained as specified by equipment manufacturers or management responsible for the equipment and records are kept for this maintenance.

Supporting services required by Ardekin Precision, include transportation, communication and internet services. Transportation services are provided by contracted carrier services, as well as Ardekin Precision delivery trucks. Company-owned delivery trucks are maintained per manufacturers' recommendations, as needed.

Communication services are provided by various telephone, wireless, and internet access companies. Management is responsible for administrating and coordinating these contracts.

6.4 Work Environment

Ardekin Precision determines and manages the work environment needed to achieve conformity to product requirements, including safety considerations for employees. Management is responsible for ensuring relevant workplace policies are implemented. This is accomplished mainly through training and awareness programs and, where necessary, disciplinary actions.

The management is responsible for identifying those operations where conditions could impact product conformity and provide appropriate information to employees to prevent nonconformities from occurring. These conditions might include temperature, humidity, lighting, cleanliness, protection from electrostatic discharge, etc., depending on the specific



Document:

Quality Assurance Manual

Rev. A

Page 14

product.

7.0 Product Realization

7.1 Planning and Product Realization

Ardekin Precision management plans and develops the processes needed for product realization. Planning of product realization is performed, in part, through regular Production Meetings, as part of the quoting process and during production start-up, generally including the Process Engineer and other personal as required.

In planning product realization, Ardekin Precision determines the following, as appropriate:

- a. Quality objectives and requirements for the product (see *Monitoring and Measurement of Product Procedure*) which are identified on the customers' product drawing(s) , routings and process sheets, as appropriate;
- b. The need to establish processes, documents, and provide resources specific to the product, through the use of customer drawings, routings and process sheets, as necessary;
- c. Required verification, validation, monitoring, inspection and test activities specific to the product, including the criteria for product acceptance (see *Monitoring and Measurement of Product Procedure*) which are identified on the customers' product drawing(s), routings and process sheets, as appropriate;
- d. Records and material certification needed to provide evidence that the production processes and resulting product meet requirements, i.e., sign-offs on the routings;
- e. The identification of resources to support operation and maintenance of product, when applicable.

The output of this planning includes a quality plan, which consists of a Shop Load Report, material order forms, process sheets and or routings.

7.2 Customer-Related Processes

7.2.1 Determination of requirements related to the product

Prior to acceptance of a customer order, Ardekin Precision reviews:

- a. Requirements specified by the customer, including the requirements for delivery activities such as delivery date, special delivery requirements, and any inspection results that must accompany the product being delivered;
- b. Requirements not stated by the customer but necessary for specified or intended use, where known, based on experience and expertise of Ardekin Precision personnel for similar requirements and product characteristics;
- c. Statutory and regulatory requirements related to the product that are specified by the customer, including special handling, packaging or delivery regulations which are also specified on the routing or process sheet; and
- d. Any additional requirements determined by Ardekin Precision

7.2.2 Review of requirements related to the product

Ardekin Precision reviews the requirements related to the product through a quoting process. This review is conducted prior to Ardekin Precision's commitment to supply a product to the customer, i.e., acceptance of contracts or orders, acceptance of changes to contracts or orders, and ensures that:

- a. Product requirements are defined,
- b. Contract or order requirements differing from those previously expressed are resolved,
- c. Ardekin Precision has the ability to meet the defined requirements, and
- d. Appropriate risks, such as new materials, new processes, short delivery time, etc. have been considered.

In some cases, quotes are provided to customers to indicate Ardekin Precision understands the customer requirements, including expected quantities and timeframes for production and deliveries, as well as delivery arrangements.

No verbal agreements or instructions will be allowed.

Prior to order acceptance, the Process Engineer reviews the Shop Load Report, with input from outside service providers, as necessary. The current Shop Load Report is evaluated



Document:

Quality Assurance Manual

Rev. A

Page 16

against customer delivery requirements to determine the actual delivery expectation to communicate to the customer as part of the quoting process or order acknowledgement.

An order acknowledgement is sent to the customer, when requested by the customer, after acceptance of the order. The order acknowledgement indicates the drawing revision level to which the order has been accepted as verification of review of the drawing revision and “no rev” in cases where there is no revision level specified on the customer drawing or other specification. In the case of computerized order acknowledgement systems, additional revision information may not be included unless designated by the customer. The acknowledgement to the customer is maintained as a record of the review of customer requirements.

Where product requirements are changed by either the customer or Ardekin Precision, Ardekin Precision ensures that relevant documents, such as customer-supplied drawings, internal material order forms, routings and process sheets, are amended and that all affected personnel are made aware of the changed requirements.

After delivery of product to the customer, the order is again reviewed by the President to evaluate costs (profitability) and the ability to meet customer expectations. This evaluation is used to determine the need to re-quote the job if the customer provides this opportunity in the future.

7.2.3 Customer Communication

Ardekin Precision determines and implements effective arrangements for communicating with customers in relation to:

- a. Product information,
- b. Inquiries, contracts or order handling, including amendments, and
- c. Customer feedback, including customer complaints.
- d. Changes that may affect quality (ownership, manufacturing location, process inspection techniques) prior to effectivity of change.

Ardekin Precision provides notification of any changes in the certification/registration/ accreditation/ or major audit findings within (2) business days of receiving notification of the change or finding.

Significant communication with customers relating to these topics is recorded on the Purchase Order (delivery commitments or other deviations from order acknowledgement), Routing/Material order forms and Drawing (clarifications or changes in product characteristics), or on Action Requests (corrective action resulting from product or process nonconformities), depending on the nature of the feedback.



Document:

Quality Assurance Manual

Rev. A

Page 17

Customer feedback, resolutions of customer concerns, and significant issues that impacted customer commitments are used as input to the Management Review process to drive continual improvement and improve customer satisfaction.

7.3 Design and Development – Excluded from the quality management system
Not applicable to Ardekin Precision at this time (see justification in section 4.2.2b)

7.4 Purchasing

7.4.1 Purchasing Process

The management of Ardekin Precision ensures that purchased product/service conforms to specified purchase requirements through receiving inspection, or supplier-provided certificates or inspection results, where appropriate. The type and extent of control applied to the supplier and the purchased product/service are dependent upon the effect of the purchased product or service on subsequent product realization or the final product.

Ardekin Precision evaluates and selects suppliers based on their ability to supply in accordance with Ardekin Precision's requirements, including meeting product/service specifications and delivery requirements (*see Supplier Selection and Evaluation Procedure*). Existing suppliers with a satisfactory quality performance history, as of 11/15/04, are exempted from the initial evaluation and are considered approved, and record of their approval and performance history prior to that date is not required.

On-going evaluation of on-time delivery is part of the performance criteria for continuing supplier relationships. When the supplier delivery performance has caused a problem with Ardekin Precision's ability to meet their customer delivery commitment, this is recorded on an Action Request and the supplier is contacted verbally for corrective action. When there are repeated occurrences of a supplier having difficulty in meeting delivery commitments, an Action Request will be sent to the supplier with a request for written corrective action.

Initial evaluation of new suppliers may include obtaining references of the supplier's performance, capability and capacity information, and verification of the supplier's quality management system. Specific criteria for approved special process sources, i.e., requirement to provide certificates for product traceability, are passed along to suppliers, as appropriate.

Customer-designated sources are also included in the supplier evaluation process, but are excluded from meeting specified criteria for selection since the customer has already completed that process.



Document:

Quality Assurance Manual

Rev. A

Page 18

Records of supplier approval are maintained in a Supplier List, which also includes the scope of the supplier approval, e.g., heat treating, plating, part machining, etc. The Process Engineer and the DQR Manager have the responsibility and authority to approve and disapprove all suppliers.

Records of the results of evaluations and any necessary actions arising from the evaluation are maintained as part of Management Review (see *Management Review Procedure*).

7.4.2 Purchasing Information

Purchasing information describes the product to be purchased, including where appropriate:

- a. Requirements for approval of product, procedures, processes and equipment,
- b. Requirements for qualification of personnel,
- c. Quality management system requirements,
- d. The name or other positive identification, and applicable revisions of material or process specs, drawings, inspection requirements or other necessary technical information,
- e. Requirements for design, test, verification, inspection and acceptance,
- f. Requirements for test specimens for approval, inspection or audit,
- g. Requirements relative to supplier notification of nonconforming products and arrangements for approval of supplier nonconforming material,
- h. Requirements for the supplier to provide notification of changes in processes or products, and when required, to obtain approval of those changes,
- i. Right of access to all pertinent facilities and applicable records by the company or its customers, and also by regulatory authorities,
- j. Requirements for the supplier to pass along requirements to their supply chain any applicable requirements specified in the purchasing documents, including key characteristics, when appropriate.

Ardekin Precision ensures the adequacy of specified purchase requirements prior to their communication to the supplier by reviewing the Purchase Order prior to sending it to the supplier. In addition, verbal communication to suppliers is repeated back to Ardekin Precision personnel to verify that the requirements are understood by the supplier and a record is kept, including the date of contact with the supplier, supplier contact person, product/service purchased and the initials of the person recording the information.

7.4.3 Verification of Purchased Product

Ardekin Precision inspects or verifies purchased product to ensure that it meets purchase



Document:

Quality Assurance Manual

Rev. A

Page 19

requirements. When a nonconforming delivery is identified, the receiving personnel contacts the Process Engineer and DQR Manager to initiate an Action Request. The report is established and processed in accordance with *the Control of Nonconforming Product Procedure*. This information is used as part of the supplier evaluation process during Management Review.

Verification activities include:

- a. Obtaining evidence of product conformity from the suppliers, e.g., inspection/test reports, process control records, or certificates of conformity;
 1. When inspection/test reports are used as the verification method, or as defined on the purchase order, the data in those records is accepted per the appropriate specification(s);
 2. For raw material used in product produced for customers that require traceability, test reports and material certifications provided for this raw material will be validated annually. Records of this verification are retained in the applicable job packet;
- b. Visiting the supplier's premises to audit their process or inspect product;
 1. Where Ardekin Precision or its customer intend to perform verification at the supplier's premises, Ardekin Precision will contact the supplier of the intended verification arrangements and methods to be used for product verification in advance of the visit.
- c. Review of documentation pertaining to product realization and/or inspection/test;
- d. Incoming inspection/verification of product upon receipt from the supplier;
- e. Delegation of verification of product specifications to the supplier;
 1. In cases where the verification is delegated to the supplier, documentation of the requirements to be followed by the supplier are provided to the supplier and maintained as part of the supplier's file;
- f. Supplier certification.

Purchased product is not used or processed to the next operation until the appropriate material certification is logged on the routing, unless it is released and recorded under positive recall.

In some cases, further verification of delivered materials will be completed at the start of production (see the *Monitoring and Measurement of Product Procedure* for specifics). Discrepancies will be communicated to the supplier to determine correction, as appropriate (see *Control of Nonconforming Product Procedure*).

In addition, for recurring problems corrective action may be initiated with the supplier as defined in the *Corrective Action Procedure*.



Document:

Quality Assurance Manual

Rev. A

Page 20

Where specified contractually, the customer or their representatives are allowed to visit the supplier's premises, as well as Ardekin Precision premises, to verify that subcontracted product meets specified requirements. Verification by the customer not does absolve Ardekin Precision of the responsibility to provide acceptable product. Nor does this preclude future rejection by the customer.

7.5 Production and Service Provision

7.5.1 Control of Production and Service Provision

Ardekin Precision plans and carries out production under controlled conditions.

Planning considerations include the following, when applicable:

- a. The need to establish process controls and development of documents, which constitute control plans (customer-provided drawings, routings, process sheets, etc.), for special consideration to key characteristics, when specified;
- b. The identification of in-process inspection points when adequate inspection or verification of product conformance cannot be determined at a later stage;
- c. The design, manufacture and use of tooling to allow for variable measurements, particularly for key characteristics, where possible; and
- d. Special processes (see 7.5.2).

Controlled conditions include, as applicable:

- a. The availability of information that describes the characteristics of the product via the customer drawing, process sheets and the routing;
- b. The availability of work instructions, as documented on the routing and process sheets;
- c. The use of suitable equipment and certified welders, when necessary;
- d. The availability and use of monitoring and measuring devices for checking product specifications, when applicable;
- e. The implementation of monitoring and measuring before product is shipped to the customer;
- f. The implementation of release of product after inspection, and delivery activities appropriate for the product being delivered (post-delivery activities are excluded – see 4.2.2b);
- g. Accountability for all product during manufacture, including segregation of nonconforming product, maintenance of customer inventory, split orders;
- h. Evidence that all manufacturing and inspection activities have been completed as documented or otherwise authorized and approved;
- i. Provision for prevention, detection and removal of foreign objects during the manufacture and inspection of product;



Document:

Quality Assurance Manual

Rev. A

Page 21

- j. Monitoring and control of utilities and supplies, to the extent that they affect product quality;
- k. Criteria for workmanship, specified in a clear, concise manner, as appropriate for the work specified.

7.5.1.1 Production Documentation

Production operations are carried out according to approved data that includes, as necessary:

- a. drawings, parts lists, routings, process sheets;
- b. a list of specific or non-specific tools and numerical control machine programs required, along with any specific instructions associated with their use.

7.5.1.2 Control of Production Process Changes

The Process Engineer, DQR Manager and President are authorized to approve changes to production processes.

Changes that require customer and/or regulatory authority approval are identified as part of the contract review.

Changes affecting processes, production equipment, tools and programs are documented and appropriate approvals obtained when the changes are made. When procedures or work instructions are needed to control the implementation of these changes, the Process Engineer will develop them.

The results of changes to production processes are assessed by the Process Engineer to confirm that the desired results are achieved without causing adverse effects to product quality.

7.5.1.3 Control of Production Equipment, Tools and NC Machine Programs

Production equipment, tools and NC machine programs are validated prior to use as part of the production set-up, and maintained and inspected periodically according to documented requirements.

First article inspection, which verifies product to the design specification, is used to validate production equipment and tooling set-up prior to starting the production run.

Storage requirements, including periodic preservation or condition checks, are established for production equipment or tooling that is maintained in storage or unused in production for extended periods of time.

7.5.1.4 Control of Work Transferred

When planning to temporarily transfer work to a location outside the Ardekin Precision's facilities, the process to control and validate the quality of the work of the supplier is defined by the Process Engineer and DQR Manager.



Document:

Quality Assurance Manual

Rev. A

Page 22

7.5.1.5 Control of Service Operations

Where servicing is a specified requirement, service operation processes (provided on-site at Ardekin Precision) provide for:

- a. A method of collecting/analyzing in-service data, through the Corrective Action process;
- b. Actions to be taken where problems are identified after delivery, including investigation, reporting activities, and actions on service information consistent with contractual and/or regulatory requirements;
- c. The control/update of technical documentation, provided by Ardekin Precision, relating to the product requiring service;
- d. The approval, control and use of repair schemes, when necessary;
- e. The controls required for off-site work, e.g., work undertaken at the customer's facilities. Note: Ardekin Precision does not provide service to product outside of Ardekin Precision's facility. This requirement would be fulfilled through subcontract and managed through the purchasing process (see 7.4.1), is necessitated by contract.

7.5.2 Validation of Processes for Production and Service Provision

For outsourced processes ("special processes"), methods of verification and control are determined based on the specific process performed and the effect of the purchased product on subsequent product realization or the final product. For product specifications that cannot be inspected or measured at Ardekin Precision, suppliers are asked to provide records of product conformance, e.g. certificates of conformity and/or inspection/test results.

Additionally, supplier historical performance and ability to meet specified requirements is considered when choosing service providers of outsourced processes. Ardekin Precision utilizes customer-approved vendors whenever possible to assure adherence to customer requirements.

When contractually required, qualification and approval of special processes will be completed prior to use. This requirement will be determined during the production planning process.

7.5.3 Identification and Traceability

Where appropriate, Ardekin Precision identifies the product by suitable means throughout product realization.

Ardekin Precision identifies the product status with respect to inspection requirements, which are recorded on the routing. Identification of the configuration of the product is also maintained on the routing to identify any differences between the actual configuration and



Document:

Quality Assurance Manual

Rev. A

Page 23

the agreed configuration.

When acceptance authority media are used (stamps, passwords, signatures), Ardekin Precision has documented controls for this media.

Where material traceability is a customer requirement, Ardekin Precision controls and records the unique material or lot identification for the product.

According to the level of traceability required by the customer, the following practices are maintained:

- a. Identification provided throughout product life;
- b. All products from the same batch of raw material or from the same manufacturing batch are traced;
- c. For an assembly, the identity of its components and those of next higher assembly (when known to Ardekin Precision), are traced;
- d. For a given product, a sequential record of its production (mfg, assembly, inspection) available for future retrieval.

7.5.4 Customer Property

Ardekin Precision personnel exercise care with customer property while it is under Ardekin Precision's control or being used by Ardekin Precision. Customer property includes customer-provided material, components, inspection equipment, fixturing, tooling, and drawings or other specifications.

Ardekin Precision identifies the material/product with the customer name or job number, verifies, protects, and safeguards customer property provided for use or incorporation into the product.

If any customer property is lost, damaged or otherwise found to be unsuitable for use, this is reported to the customer and records are maintained on Action Requests.

7.5.5 Preservation of Product

Ardekin Precision personnel preserve product conformity during internal processing, maintenance of inventory, and delivery to the intended destination. This preservation includes identification, handling, packaging, storage and protection. Preservation also applies to raw materials and the constituent parts of a product.

Necessary preservation methods are determined by customer-specified requirements, material type, length of storage or transport, etc. and are communicated verbally to



Document:

Quality Assurance Manual

Rev. A

Page 24

personnel responsible for packaging and transport of product. Special instructions for preservation or packaging are included on the routing and/or process sheets.

Preservation of product also include provisions for:

- a. cleaning;
- b. prevention, detection and removal of foreign objects, such as: burrs, machine oil, grinding dust or rust;
- c. special handling for sensitive products;
- d. marking and labeling, including safety warnings, when appropriate;
- e. shelf life control and stock rotation;
- f. special handling for hazardous materials.

Methods for preservation, including prevention, detection and removal of foreign objects, are discussed during employee training and understood by all employees responsible for these practices.

Documents required by the contract or special order instructions that are to accompany the product are provided to the customer at delivery and are also protected against loss or deterioration, to the extent possible, by packaging them with the product or delivering the documents to the customer directly.

7.6 Control of Monitoring and Measuring Devices

Ardekin Precision management determines the monitoring and measurement to be utilized and the monitoring and measuring devices needed to show that product meets specifications.

Measuring and testing equipment are selected on the basis of their capability to provide the necessary accuracy of the measurement. The Process Engineer, DQR Manager or machine operator are responsible for selecting appropriate measuring and testing equipment.

Where necessary to ensure valid results for First Article Inspection and Final Inspection, measuring equipment is:

- a. Calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to ISO 17025 (in any case where no such standards exist, the method used for calibration or verification is documented and recorded); calibration intervals to achieve a minimum 95% reliability target for M&TE (Measuring and Testing Equipment) in-tolerance at the end of the interval schedule.
- b. Adjusted or re-adjusted as necessary;
- c. Identified to enable calibration status to be determined with manufacturers labels or other markings;
- d. Safeguarded from adjustments that would invalidate the measurement

- results;
- e. Protected from damage and deterioration during handling, maintenance and storage;
 - f. Be recalled for calibration when due.

The Process Engineer and DQR Manager are responsible for maintenance, calibration, and control of all measuring and test equipment. The DQR Manager maintains records of all calibrated measuring and test equipment that is company-owned or employee-owned. The list identifies every piece of equipment by its name, type, size, unique identification information, location, calibration frequency, last calibration date, and standards used, method of calibration and acceptance criteria.

Measuring and test equipment used is maintained, stored, and handled in such a way as to preserve its accuracy and fitness for use. In addition, suitable environmental conditions are maintained in the area where internal calibration of inspection and measuring equipment is completed.

Calibration of measuring and test equipment is carried out using calibration instruments or standards certified to a NIST standard. This relationship is identified on the calibration record. Equipment that is calibrated by an outside service includes a certificate that is also traceable to national standards. The DQR Manager maintains calibration records and certificates.

Calibrated equipment is labeled indicating the due date for next calibration. Equipment with a past-due calibration date is not used for first article or final product acceptance and is immediately brought to the attention of the DQR Manager if it is needed for first article or final product acceptance.

Inspection and test equipment may be exempted from calibration when used in situations where accuracy of measurement is not important, or where the measurement does not have any relation to product verification or process control. Such equipment is not labeled with calibration status. Any personnel using such equipment are made aware that calibration has not been performed and that uncalibrated equipment should not be used for first article or final product acceptance.

When a piece of measuring or test equipment is found to be out of calibration or appears to give inaccurate readings, the equipment is re-checked. If it is confirmed that the equipment is indeed out of calibration and the readings are outside of required accuracy, the President investigates and reviews recent previous results from other product inspection done with the same equipment. This investigation is recorded in the calibration record or on an Action Request form.

If it is determined that previous measurements were affected by measuring or test equipment, an Action Request will be completed, in accordance with the *Control of Nonconforming Product Procedure*, and the customer will be contacted, if appropriate.

Customer-supplied measuring equipment is calibrated by the customer and maintained as



Document:

Quality Assurance Manual

Rev. A

Page 26

part of the customer's calibration system. Ardekin Precision employees who use customer-supplied measuring equipment will verify the calibration status of this equipment prior to use and notify the DQR Manager if the equipment is not calibrated or past its calibration due date.

8 Measurement, Analysis and Improvement

8.1 General

Ardekin Precision plans and implements the monitoring, measurement, analysis and improvement processes needed:

- a. To demonstrate conformity of the product,
- b. To ensure conformity of the quality management system, and
- c. To continually improve the effectiveness of the quality management system.

Product conformity verification, monitoring and analysis are defined in the *Monitoring and Measurement of Product Procedure* and on routings, where necessary.

Conformance and effectiveness of the quality system is monitored by internal audits, customer satisfaction, and by measuring quality performance evaluated through quality objectives. Results of these activities are evaluated during management review and are used to identify opportunities for improvement (see *Internal Audit Procedure* and *Management Review Procedure*).

Statistical techniques, such as sampling methods or evaluation of trends may be applied to:

- Testing, inspection and validation of processes and products, particularly with respect to key characteristics;
- Evaluation of measurement systems and equipment capability; and
- Analysis of quality performance and quality objectives.

Management identifies the need for using statistical techniques and specifies which methods to apply.

8.2 Monitoring and Measurement

8.2.1 Customer Satisfaction

As one of the measurements of the performance of the quality management system, Ardekin Precision management monitors information relating to customer perception, specifically



Document:

Quality Assurance Manual

Rev. A

Page 27

regarding whether Ardekin Precision has met customer requirements. The metrics for determining Customer Satisfaction are identified in the Customer Satisfaction Procedure.

Corrective actions, preventive actions and/or continual improvement actions may be identified, as appropriate, to enhance performance toward overall customer satisfaction or to address the needs of a particular customer.

Customer Satisfaction Survey results are assessed during the Management Review process for trends and significant performance issues affecting customer satisfaction. Additionally, overall customer satisfaction is evaluated during the Management Review process and improvements are identified when the results of the quality objectives indicate a need to increase customer satisfaction. Appropriate actions are discussed, recorded in the Management Review Agenda/Minutes and acted upon (see *Management Review Procedure*).

8.2.2 Internal Audits

Ardekin Precision conducts internal audits of all processes annually, or more often if required through contractual or regulatory requirements, to determine whether the quality management system:

- a. Conforms to the planned arrangements of the requirements of AS9100 and to the quality management system requirements established by Ardekin Precision, and
- b. Is effectively implemented and maintained.

The internal audit program is planned by the Management Representative or designee, taking into consideration the status and importance of the processes and areas audited, as well as the results of previous audits.

The criteria for each audit is to evaluate conformance to the AS9100 Standard and determine if the areas or processes being audited are effective in meeting customer requirements and the quality policy.

The scope of each audit specifies the areas or processes that are to be audited. The specific clauses associated with the areas or processes are identified in the appropriate Audit Checklists.

Audit methods include interviewing personnel in the area(s) specified by the scope, reviewing applicable Quality Manual sections and procedures for the clauses identified in the Audit Checklist and sampling records that are being kept for those processes.



Document:

Quality Assurance Manual

Rev. A

Page 28

Auditors are selected so that they do not audit their own work. This also ensures objectivity and impartiality of the audit process.

The responsibilities and requirements for planning and conducting audits, and for reporting results and maintaining records are defined the *Internal Audit Procedure*.

Management ensures that corrective and preventive actions are taken without undue delay. Management is also responsible for following up on the corrective and preventive actions to show the activities identified were effective in eliminating the noted problems and their causes (see *Corrective Action Procedure* and *Preventive Action Procedure*).

8.2.3 Monitoring and Measurement of Processes

Ardekin Precision applies suitable methods for monitoring and, where applicable, measurement of the quality management system processes. These methods demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action are taken, as appropriate, to ensure conformity of the product.

Quality management system processes are monitored by variety of approaches and techniques, as appropriate for a particular process and its importance. These include:

- Conducting internal audits of the quality management system;
- Monitoring trends in corrective and preventive action requests;
- Analyzing product conformity and other quality performance data (quality objectives) and trends;
- Measuring and monitoring customer satisfaction.

When a quality management system process does not conform to requirements or is ineffective in meeting the necessary requirements, the Management Representative requests correction of the nonconforming process, as well as corrective action to be identified, in accordance with the *Corrective Action Procedure*. When trends are identified, preventive action may also be identified by management (see *Preventive Action Procedure*).

If the process nonconformity also resulted in a product nonconformity, the nonconforming product will be identified and controlled as documented in section 8.3 and the Control of Nonconforming Product procedure.

8.2.4 Monitoring and Measurement of Product

Ardekin Precision monitors and measures the characteristics of the product to verify that product requirements have been met. This is carried out at appropriate stages of the product realization process in accordance with the *Monitoring and Measurement of Product Procedure*.

Evidence of conformity with acceptance criteria is maintained in the form of Inspection Reports, when necessary, and routing sign-offs, which also indicate the person(s) authorizing release of product.

Product release does not proceed until all required operations and inspections have been satisfactorily completed, unless otherwise approved and signed-off by the President, and where applicable, by the customer.

If sampling inspection is used for product acceptance, it is statistically valid and appropriate for the product being sampled. In particular, the plan will prevent the acceptance of lots whose sample have known nonconformities.

When required, the plan will be submitted for customer approval.

When key characteristics are identified, they are monitored and controlled via the routing and process sheets.

Product is not used or released to the customer until it has been inspected, unless it is released under positive recall procedures pending completion of all required measurement and monitoring activities.

Product release and/or service delivery does not proceed prior to completion of planned arrangements (via the routing or process sheets) unless otherwise approved by the President, and where applicable, by the customer.

8.2.4.1 Inspection Documentation

Measurement requirements for product or service acceptance are documented, in some cases as may be part of the drawing, routing or the process sheets, and include where applicable:

- Criteria for acceptance and/or rejection
- Where in the sequence the measurement/testing is performed or how many need to be sampled
- A record of the results
- Type of instrument required and any special instructions

Inspection records show actual data required by the drawing, routing or process sheets. Where required, to show product qualification, records provide evidence that product meets defined requirements.

8.2.4.2 First Article Inspection

Ardekin Precision provides a process for the inspection, verification, and record of a representative item from the first production run of a new part, or following any subsequent change to the product specification or process that invalidates the previous first article inspection result.

8.3 Control of Nonconforming Product

Ardekin Precision ensures that product which does not conform to product requirements, including product returned from a customer, is identified with a red tag while waiting for disposition to be determined and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product are defined in the *Control of Nonconforming Product Procedure*.

Ardekin Precision deals with nonconforming product by one or more of the following ways:

- a. By taking action to eliminate the detected nonconformity (rework/repair);
- b. By authorizing its use, release or acceptance under concessions by a relevant authority and, where applicable, by the customer (accept as-is);
 - 1) Since product is produced to customer design, customer approval of “accept-as is” decision must be obtained;
- c. By taking action to preclude its original intended use or application (scrap).
 - 1) Articles deemed scrap must be clearly identified and rendered unusable within 30 days of final disposition unless otherwise instructed in writing by the customer.

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, are maintained.

When nonconforming product is corrected, it is subject to re-evaluation/re-inspection to demonstrate conformity to the requirements. This re-inspection is recorded.

When nonconforming product is detected after delivery or use has started, Ardekin Precision takes action appropriate to the effects, or potential effects, of the nonconformity to ensure the customer is provided with conforming product and is satisfied with the results of the actions taken.

- a. In particular, when reliability or safety of the product is determined to be affected, the customer will be notified within 24 hours, or the next business day. This is the responsibility of the President. This notification includes a description of the parts affected, including part numbers, quantities and date(s) delivered.
- b. If contractually agreed, or controlled by regulatory requirements, the President will notify distributors and regulatory authorities, as well.
- c. When notified of defective product shipped to the customer (escapes), all investigations will be brought to the President within 24 hours.



Document:

Quality Assurance Manual

Rev. A

Page 31

8.4 Analysis of Data

Ardekin Precision determines, collects and analyzes appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made, including identification of preventive action.

This includes data generated as a result of monitoring and measurement of quality objectives and from other sources, such as production efficiencies (estimated hours versus actual hours.)

The analysis of data provides information relating to:

- a. Customer satisfaction (via Customer Satisfaction Surveys),
- b. Conformity to product requirements (from inspection results/records and corrective action), and
- c. Characteristics and trends of processes (from Shop Load Report, internal audits, corrective action, preventive action, quality objectives, etc.)

8.5 Improvement

8.5.1 Continual Improvement

Ardekin Precision continually improves the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, customer satisfaction information, corrective and preventive actions and management review.

Opportunities and priorities for improvement are identified by comparing present quality performance to goals defined in the quality policy and quality objectives.

Quality performance is evaluated through the management review process (see *Management Review Procedure*). Where quality performance falls short of a defined quality objective or expected level of customer satisfaction, Management identifies specific improvement actions to reach the quality objective.

In addition to management reviews, Management will utilize Value Stream Mapping as a continuous improvement tool to identify opportunities continually, based on regular feedback from production. Employees are encouraged to contribute ideas for improving products, processes, systems, productivity, and working environment. These improvement opportunities are evaluated and prioritized by Management and, where appropriate, are implemented through corrective or preventive actions.

Records of continual improvement are maintained as part of the action items identified in the management review minutes or on Action Request forms, depending on the nature of the improvement project and where the continual improvement was initiated.



Document:

Quality Assurance Manual

Rev. A

Page 32

8.5.2 Corrective Action

Ardekin Precision takes action to eliminate the cause of nonconformities in order to prevent recurrence. Appropriate corrective actions are determined with consideration to the impact and effect of the nonconformance on meeting customer requirements, cost, and effectiveness of the overall quality management system.

To ensure effectiveness of the corrective action, suppliers shall perform 100% inspection of the deviated characteristics for the next (3) three consecutive manufacturing lots.

The *Corrective Action Procedure* is established to define requirements for:

- a. Reviewing nonconformities (including customer complaints),
- b. Determining the causes of nonconformities,
- c. Evaluating the need for action to ensure that nonconformities do not recur,
- d. Determining and implementing action needed,
- e. Recording the results of action taken, and
- f. Reviewing corrective action taken.

8.5.3 Preventive Action

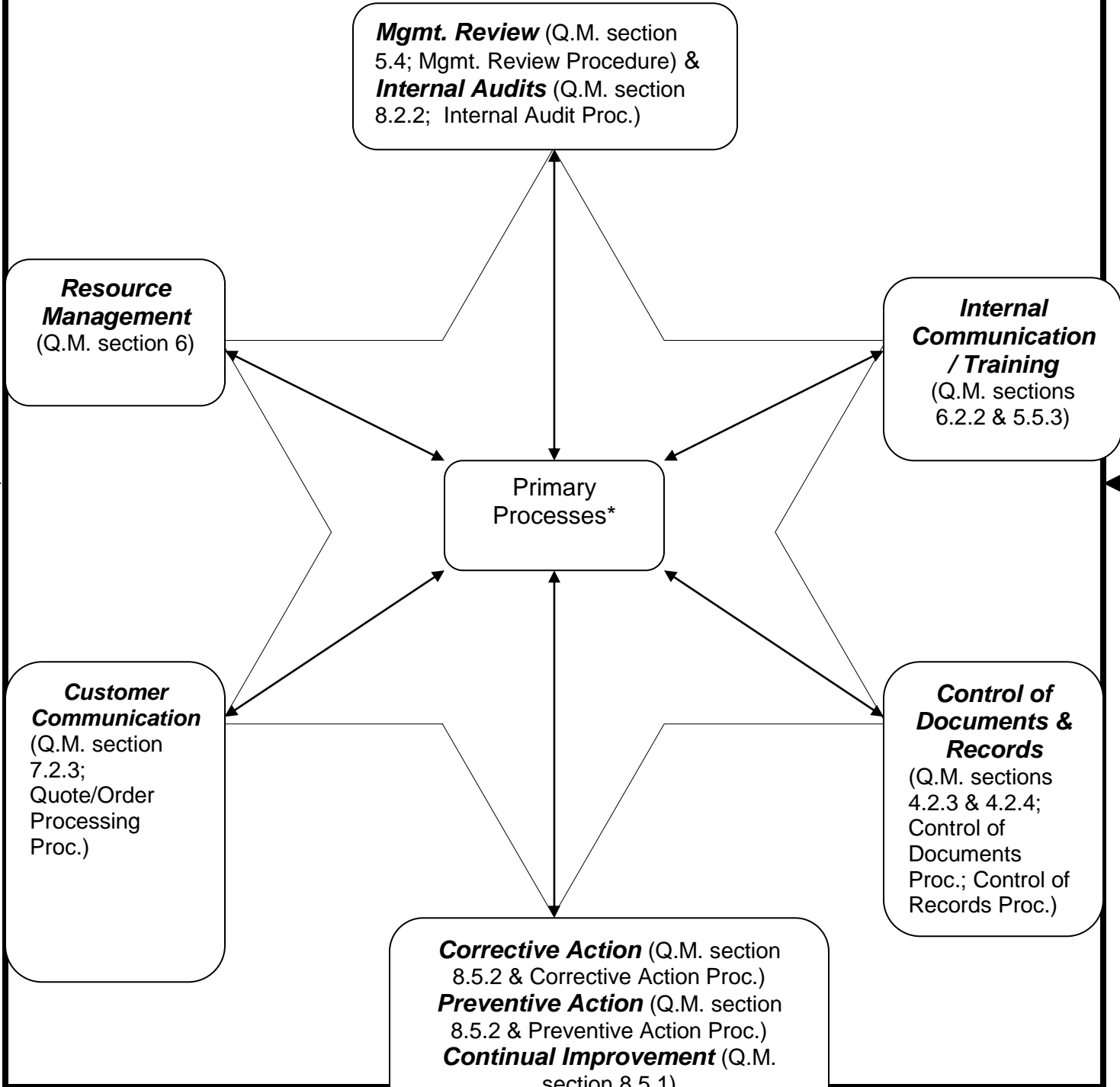
Ardekin Precision determines action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Appropriate preventive actions are determined with consideration to the impact and effect of the potential problem on meeting customer requirements, cost, and effectiveness of the overall quality management system.

The *Preventive Action Procedure* is established to define requirements for:

- a. Determining potential nonconformities and their causes,
- b. Evaluating the need for action to prevent occurrence of nonconformities,
- c. Determining and implementing action needed,
- d. Recording the results of action taken, and
- e. Reviewing preventive action taken.

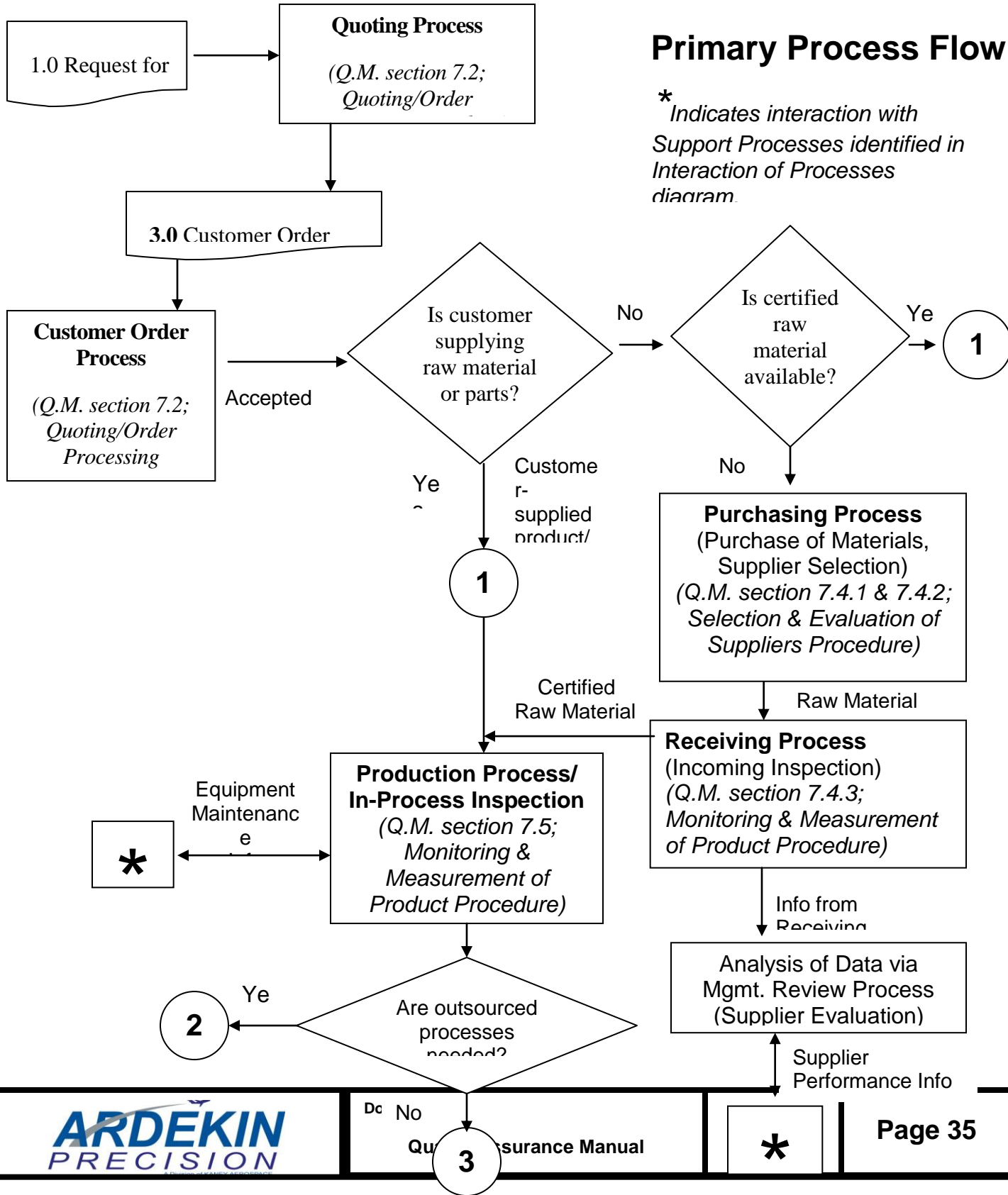
Appendix A

Interaction of Processes – Primary and Support



Primary Process Flow

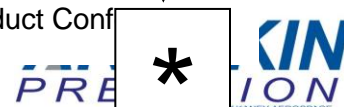
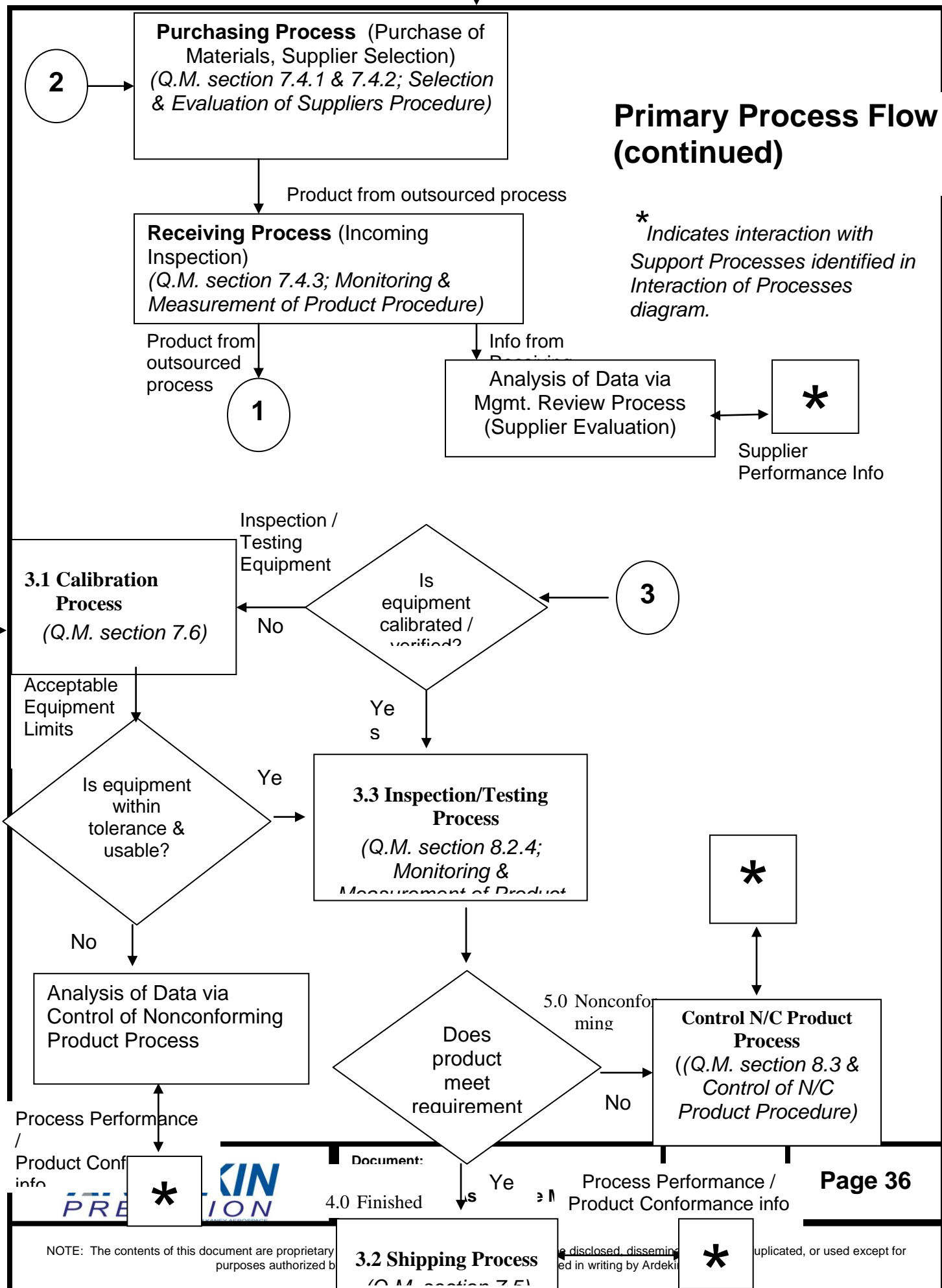
* Indicates interaction with Support Processes identified in Interaction of Processes diagram.



NOTE: The contents of this document are proprietary to Ardekin Precision, LLC, and shall not be disclosed, disseminated, copied, duplicated, or used except for purposes authorized by contract or otherwise expressly authorized in writing by Ardekin Precision

Primary Process Flow (continued)

* Indicates interaction with Support Processes identified in Interaction of Processes diagram.



NOTE: The contents of this document are proprietary purposes authorized by

3.2 Shipping Process
(Q.M. section 7.5)

disclosed, disseminated in writing by Ardeki



uplicated, or used except for

Appendix B



MISSION STATEMENT

ARDEKIN PRECISION WILL UNDERSTAND THE WORD "VALUE" AS IT IS DEFINED BY EACH CUSTOMER, AND WE WILL APPLY THAT MEANING TO EVERY PRODUCT AND SERVICE WE PROVIDE.

QUALITY POLICY

ARDEKIN PRECISION WILL EXECUTE ITS MISSION STATEMENT TO:

- PROVIDE A QUALITY PRODUCT AND SERVICE*
- COMMIT TO MEASURABLE IMPROVEMENT OBJECTIVES*
- FOSTER GROWTH OPPORTUNITES FOR EVERY EMPLOYEE*

Measurable Objectives:

- 1. <0.005% Cost of Warranty*
- 2. 100% On-Time Delivery*
- 3. Customer Satisfaction Metrics*



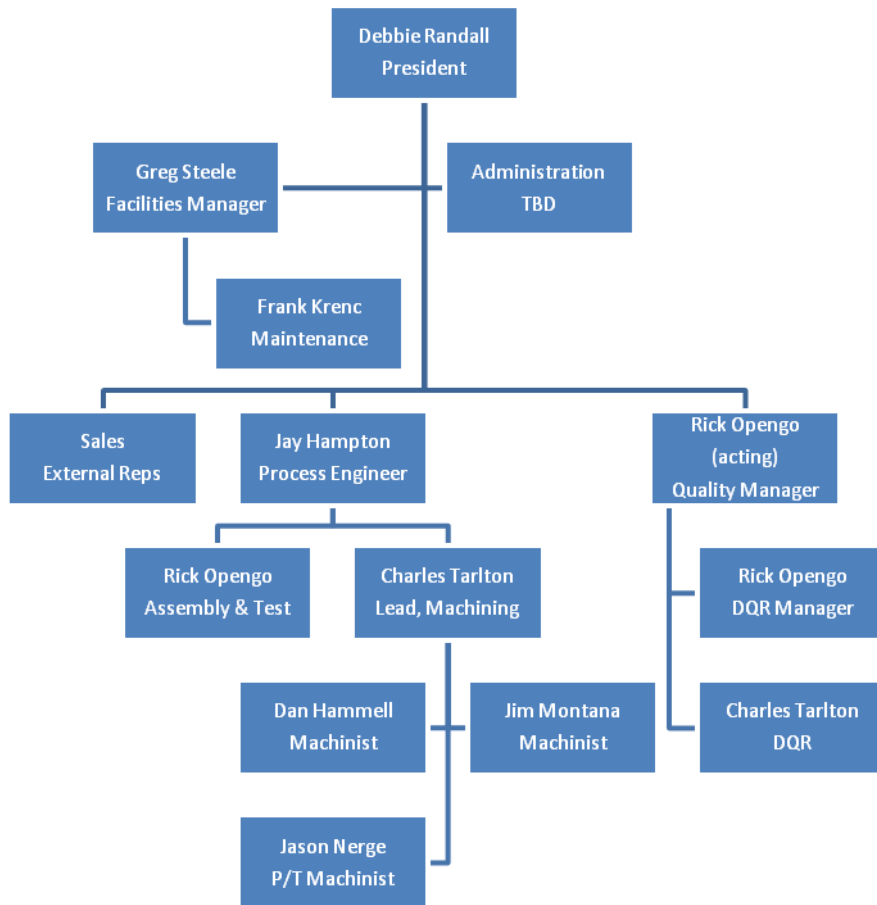
Document:

Quality Assurance Manual

Rev. A

Page 37

Appendix C - Organization Chart



Document:
Quality Assurance Manual

Rev. A

Page 38

NOTE: The contents of this document are proprietary to Ardekin Precision, LLC, and shall not be disclosed, disseminated, copied, duplicated, or used except for purposes authorized by contract or otherwise expressly authorized in writing by Ardekin Precision