

Quality Policy Plan

Controlled Copy (1)

ID#: APS-QPP-B

Mission Statement

Ahrens Precision Structures' philosophy is continuous improvement of customer satisfaction. Its objective is to meet or exceed customer requirements.

Our mission is to continue to foster superior quality machine work in aligning our customer's needs with our empowered employees and management team.

Ahrens Precision Structures' Quality Policy Plan

TABLE OF CONTENTS

Section	Description
0.10	Scope
0.20	Distribution and Manual Control
0.30	Quality Policy
0.40	Organization Chart
1.00	Management Responsibility
2.00	Quality System
3.00	Contract Review
4.00	Document Control
5.00	Purchasing
6.00	Customer Supplied Products/Materials
7.00	Product Identification and Traceability
8.00	Process Control
9.00	Inspection and Testing
10.00	Inspection Measuring and Test Equipment
11.00	Control of Non-Conforming Product
12.00	Corrective and Preventive Action

13.00	Handling Storage Packaging Preservation & Delivery
14.00	Records
15.00	Internal Quality and Production Reviews
16.00	Training
17.00	Statistical Techniques

0.10 Scope

This quality manual describes the quality control system of Ahrens Precision Structures. It exclusively covers all custom machined products manufactured at the Georgetown, Texas location. Ahrens Precision is not ISO 9001 certified but strives to be compliant to the standard in all areas possible. Reference to the ISO 9001 standard herein describes compliancy ONLY.

0.20 Distribution and Manual Control

Controlled copies of this manual are provided to the manager of each department (see Table 1). These are labeled "CONTROLLED COPY" in red ink and have a copy number assigned to each. Copies of this manual labeled "UNCONTROLLED COPY" in red or photocopied, may be sent to our customers upon request, but are not included on the Distribution List and do not require Revision Control.

Table 1. Distribution List

Title	Department	Manual #
Owner/President	Management	1
Operations/Production Manager and Management Rep.	Management/Quality	2
Office Manager	Accounting and Customer Service	3
Head Machine Operator	Production	4

0.30 Quality Policy

Ahrens Precision Structures' philosophy is continuous improvement of customer satisfaction. Its' objective is to meet or exceed customer requirements. Our mission is to continue to foster superior quality machine work in aligning our customer needs with our empowered employees and management team. It is required that all employees participate within the Quality Policy. This policy is posted in several areas and every employee has read and signed a copy.

0.40 Organizational Chart

SECTION 1, MANAGEMENT RESPONSIBILITY

Company Policy- The Owner/President is ultimately responsible for establishing, implementing and maintaining the quality system. Specific responsibilities comprise: formulating the quality policy, defining the organization, assigning authorities and responsibilities, appointing the management representative, periodically reviewing the quality system, and making available the resources and personnel necessary to maintain the system.

General Manager:

The President appoints the General Manager as the Management Representative. He or she has the authority and responsibility to ensure that the quality system is maintained and its efficiency is continuously improved, and that the system complies with the requirements of the ISO 9001 standard.

Organization:

Inter-relationships of personnel, who manage, perform and verify work-affecting quality, are defined on the organization chart on the previous page. The Ahrens Precision Structures quality organization comprises of 4 functions:

- Operations/Production
- Quality Control
- Customer Service/Office
- Management Representative

Each function head reports directly to the President. The President and the Management Representative constitute the Executive Management.

Responsibilities:

- President-Formulates the quality policy, initiates and supervises the quality system, provides resources necessary to maintain the system.
- Operations/Production-Defines workmanship standards, follows up on Corrective and Preventive Actions, monitors quantities, controls and monitors processes, maintains production equipment, performs production engineering, administrates storage areas, administrates Product ID and traceability, determines production personnel and equipment requirements, verifies quality and quantity of received goods, maintains & calibrates measuring and test equipment, cares for building and grounds, orders approved purchasing requisitions, verifies quality and quantity of received goods, monitors and assesses supplier performance, tracks performance measurements, responds to customer comments.
- Quality Control-Initiates requests for Corrective Actions, assists with internal reviews, performs inspection & testing in accordance with the quality plan, handles non-conforming products, maintains inspection records.

- Customer Service/Office-Reviews Customer Specifications and delineates information as required, promotes and ensures company's products emphasizing their quality, aspects, and timely deliveries, provides customer liaison, service, responds to customer comments. Establishes, designates, and maintains company and customer records and files.
- Management Representative-Establishes and maintains the quality management system, conducts management reviews of the quality system, records management review minutes, prepares agenda, assists with supplier quality surveys and reviews, leads review team.

Management Review: The company's executive management reviews the quality system annually. The purpose of the review is to assess the effectiveness and continuing suitability of the quality system. The Management Representative is responsible for scheduling and conducting the reviews.

SECTION 2, QUALITY SYSTEM

Quality System Scope-Scope of the quality system is defined in the following:

- Quality Manual
- Procedures
- Work Instruction/Process Flow Charts
- Customer technical specifications and drawings
- Production and quality plans

Quality System Implementation- All personnel are responsible for implementing the quality system. The lead reviewer is responsible for coordinating, monitoring and assisting in reviewing the system. Implementation of the quality system is assessed regularly by way of internal reviews and management reviews.

Quality Plan

The purpose of production and quality plans are to sequence and coordinate production operations, define equipment to be used, and reference any specifications needed for production. Quality plans define the inspection and testing points, and also reference specific inspection instructions and acceptance criteria. The quality plans are documented on the job router/planner flow sheet. The job router/planner flow sheet lists all production and inspection steps required for the product.

SECTION 3, CONTRACT REVIEW

Company Policy- All quotes and orders are reviewed to assess if the customer's requirements are adequately defined, are well understood, and if the company has the capability to meet the

contract or quote requirements.

Application- The Management Department is responsible for conducting contract reviews for all products.

Scope of Review- The contract review comprises of verification that the customer's requirements are adequately defined, documented, well understood and that the company has the capability to meet the contract requirements.

SECTION 4, DOCUMENT CONTROL

Company Policy- All documents are reviewed and approved prior to issue. Documents are available at locations where they are used. Obsolete documents are removed from points of use. The Management Representative is responsible for coordination and enforcing the document control related activities.

Controlled Documentation- Quality system documentation comprises the following types of documents:

- Quality Manual- Level 1
- Procedures- Level 2
- Work Instructions and Process Flow Charts- Level 3
- Forms and Checklist- Level 4

Document Approval Issue- Any department can initiate a new document or document changes. All documents are reviewed and approved by the appropriate persons prior to issue. Documents are distributed to personnel and locations where they are used.

Document Changes- Document changes are reviewed and authorized by the same authority that issued the original document. Revised documents are distributed and obsolete documents are removed from points of use.

Customer Related Documentation- Customer related documents are comprised of:

- Customer drawings and specifications
- Workmanship criteria
- Customer supplied quality data

SECTION 5, PURCHASING

Company Policy- The company assesses its' suppliers and subcontractors only from those that can satisfy the company's quality requirements. Purchasing documents clearly and completely describe ordered products, including quality requirements and specifications. Purchasing documents are approved prior to release. Assessment of Subcontractors- The company

differentiates between suppliers and subcontractors. Suppliers are defined as vendors who will deliver their standard catalog products, while subcontractors are outside services that design and/or manufacture products from the customer's specifications. Assessment of suppliers and subcontractors is carried out by the Management Representative and Purchasing. Purchasing Department monitors quality performance of all suppliers and subcontractors. Those showing inadequate performance are asked to implement corrective actions and are discontinued if there is no improvement. The Purchasing Department maintains an approved supplier/subcontractor list.

Purchasing Data- The person requesting supplies prepares purchase requisitions. The documents clearly and completely describe requested products. They include precise identification of the products, reference applicable standards and state quality requirements.

Verification of Purchased Product- Ahrens Precision Structures' customer, their designee or Ahrens Precision Structures may impose the requirement of source inspection to verify compliance to specified requirements. This may occur at Ahrens Precision Structures or at the subcontractor/supplier's facility.

Responsibility- The Purchasing and Management Departments are responsible for maintaining this system.

Records- Records of the purchasing system are retained and archived.

SECTION 6, CUSTOMER SUPPLIED PRODUCTS/MATERIALS

Company Policy- Customer supplied products/materials are handled in the same manner as other products purchased for incorporation into the supplies. When specified in a contract, special handling instructions from customers will take precedent over the company's standard procedures. Loss, damage or unsuitability of a customer's product/materials is recorded and reported to the customer.

Procedure- Customer supplied products are reviewed, and stored in the same manner as other purchased products unless otherwise specified by the customer. The customer is contacted in the event of loss, damage, deterioration or unsuitability of product/material.

Responsibility- The Operations/Production Manager is responsible for maintaining this system.

SECTION 7, PRODUCT IDENTIFICATION AND TRACEABILITY

Company Policy- The customer's part number uniquely identifies products, which correlates to a corresponding customer drawing, data, specification and technical documents.

Part and Product Identification- All manufactured parts are identified by the customer's part number and are accompanied with internal job router/planners assigned by Operations/Production. The job router/planner provides for a correlation between a part and its technical data and procedures. Material certification traceability is performed and documented for all products. Material certification is available to the customer as when requested. Material certificates are archived. It is the responsibility of the Office Manager to perform all tasks associated with material certificate traceability.

SECTION 8, PROCESS CONTROL

Company Policy- Production and individual operations are planned and documented. Personnel performing complex or critical operations are provided with work instructions and workmanship criteria. Processes are controlled and performed in accordance with written procedures.

Production equipment and processes are maintained and checked for adequacy prior to use.

Production areas are clean and provide a suitable work environment.

Procedure- The production plan is specified on job router/planner. It will list all production and inspection operations necessary to manufacture, verify, and ship a product. Personnel performing the operation is trained for the task. Work instructions and workmanship standards are available to the personal performing the task.

Equipment and processes are verified to be working adequately prior to use.

Responsibilities- Operations/Production Manager is responsible for maintaining this system.

SECTION 9, INSPECTION AND TESTING

Company Policy- All inspection procedures, methods, instructions and acceptable limits are to be performed in accordance with the below listed standards:

ANSI Y14.5M-2009 – Dimensioning and Tolerancing

ANSI/ASQ Z1.4-2008 – Sampling Procedures and Tables for Inspection by Attributes

Company Policy- Inspection and testing is conducted when purchased materials are received, at significant stages of production, and prior to shipping finished products. The objective of inspections and testing is to verify conformance with specified requirements. Materials and products are prevented from being used or shipped until the required inspections are completed. Documentation of inspections are established, maintained and archived on the corresponding Job Router and submitted only when required by customer as evidence that products comply with stated requirements.

Receiving Inspection- All purchased products/materials are subjected to receiving inspection and compliance.

In-Process Inspections- In-Process inspections are performed as needed and documented on the corresponding Job Router and submitted only when required by customer.

Final Inspection- Only those products that pass final inspection are admitted to the shipping area. Final inspection is performed always and is documented on the corresponding Job Router and submitted only when required by customer.

Non-Conforming Product- Non-conforming products found during any inspections are segregated and appropriately labeled.

SECTION 10, INSPECTION, MEASURING AND TEST EQUIPMENT

Company Policy- The required measurement accuracy is known, and appropriate equipment is selected to perform the measurements. All measuring and test equipment is calibrated every 2 years with traceability to a national standard. Calibration certificates are maintained and the calibration status of measuring equipment is identified. The equipment is well maintained and its placement and uses are controlled.

Measurement Identification- The customer identifies measurement and the required accuracy on drawings. Selection of suitable equipment to perform those measurements is the responsibility of the Operations/Production Manager.

Calibration and Maintenance of Equipment- All equipment used for inspection, measuring and testing of products is calibrated with traceability to national standards. Calibration stickers

identify calibration status of equipment. The Operations/Production Manager maintains a list of measuring and test equipment, providing identification, placement and calibration status for each piece of equipment. Measuring and test equipment is maintained to preserve its accuracy and fitness for use. "Reference Only" tools are segregated and are to be checked to calibrated tools whenever used.

SECTION 11, CONTROL OF NON-CONFORMING PRODUCT

Company Policy- Non-conforming product is identified, documented, evaluated, and prevented from being used or shipped. Responsibility for disposition of non-conforming product is defined and, when required, the customer is contacted for advisement. Repaired or reworked product is re-inspected.

Identification and Documentation- All non-conforming product that cannot be corrected using methods of repair or rework are identified and documented with internal non-conformance report. Discrepant material is segregated until a disposition is made.

Non-conformity Review and Disposition- Operations/Production Manager, Quality Control Manager, or the President are authorized to make the disposition decision for a non-conforming product. The disposition decision may be:

Use as is, Rework, Scrap, Return to Supplier. The customer is contacted for advisement or acceptance of a discrepant customer supplied products/materials.

SECTION 12, CORRECTIVE & PREVENTIVE ACTION

Company Policy- The company recognizes that diligent and effective implementation of the corrective action policy is crucial to the success of the quality system. Procedures, work instructions, quality records, quality reports, internal reviews and customer comments are analyzed to detect any sources of potential quality problems. Causes of non-conformities are investigated and corrective actions are initiated to prevent recurrence. Controls are applied to ensure implementation and effectiveness.

Initiation of Corrective Action-Anyone in the company may propose initiation of a corrective action, but only the Management Department can assign a corrective action. Corrective actions are initiated as a result of:

- Identification of product non-conformity
- Customer complaints or rejections
- Noncompliance observed during audits or reviews
- Nonconformity from a supplier/subcontractor

Action items stemming from any production meetings or management reviews will be assigned corrective actions as needed.

Preventive Action- Preventive Action is done by analyzing information from process work instructions, review results, quality records and customer comments. By the proper use of this information potential non-conformities can be reduced or eliminated.

Follow Up- Process or procedure related corrective actions require a follow up. The Management Department reviews Corrective Action system data for effectiveness.

Records- Records of Corrective and Preventive Actions forms are retained and archived.

SECTION 13, Handling, Storage, Packaging, Preservation and Delivery

Company Policy- Methods and means of handling that prevent product damage and/or deterioration are provided and approved by the Management Department. Products are protected prior to and during delivery.

Handling- The Operations/Production Manager is responsible for product handling and ensuring that it is clean, complete, and ready to ship.

Storage- The storage areas and their operations are the responsibility of the Operations/Production function. Only products that are properly identified are authorized to enter and leave the storage areas.

Packaging and Delivery- The customer preferred ship method is recorded in the Office Manager's customer files. If the information is not available, the shipping department will choose a method to ensure on-time delivery.

The Office Manager and the Operations/Production Manager are both responsible for the appropriate protection and packaging of shipped products.

SECTION 14, RECORDS

Company Policy- Company and customer records are identified and stored in a suitable environment to minimize deterioration. Archiving and storage locations for records are approved by the Management Department.

Procedure- The activities of identification, collection, filing, storage, maintenance and disposition of records are governed by procedures.

Identification and Storage- Records are identified to the product, person or the activity involved. When relevant, they are signed and dated.

Records are stored in an environment that will prevent damage.

Establishment, designation, maintenance, and archiving of records are the responsibility of the Office Manager and are approved by the Management Department.

SECTION 15, INTERNAL QUALITY AND PRODUCTION REVIEWS

Company Policy- Comprehensive, planned and documented internal quality and production reviews are conducted. Reviews are scheduled on the basis of the importance and urgency of the topics. Identified non-conforming conditions are reported during reviews for appropriate action.

Planning and Scheduling- The Management Department approves an internal review plan and schedule. Every activity and area is reviewed at least once a year, but more frequent reviews may be scheduled for critical processes and where needed.

Review Team and Preparation for Review- Only personnel independent of the reviewed activities are assigned to conduct a review. The Management Department leads the review team.

Follow Up- When non-conforming conditions are identified, the lead reviewer will request the Management Department to initiate a corrective action.

Implementation and effectiveness of the corrective action is verified by Management Department.

SECTION 16, TRAINING

Company Policy- The Management Department identifies training needs of all personnel and provides the required training. Personnel performing specific tasks are qualified. Records of personnel qualifications are maintained.

Training- The company provides new employee orientation training to all employees. Other training is provided as required.

Training Record- The Office Manager maintains records of all internal and external training provided to employees.

SECTION 17, STATISTICAL TECHNIQUES

Company Policy- Only when required by the customer, statistical techniques are employed to verify the acceptability of process capability and product quality.

Process Analysis and Statistical Sampling- A critical process (as determined by management or the customer using the preventive action system) may utilize statistical techniques. Personnel using statistical techniques are provided with necessary equipment and procedures specific to the product.

Records- Records are retained and supplied when required by customer.