

Abtrex Industries, Inc.

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Quality Management System

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Scope

This Quality Manual provides specifics on the policies and procedures used by Abtrex Industries, Inc. to meet appropriate Engineering, Quality and International Standards and requirements.

Corporate Profile

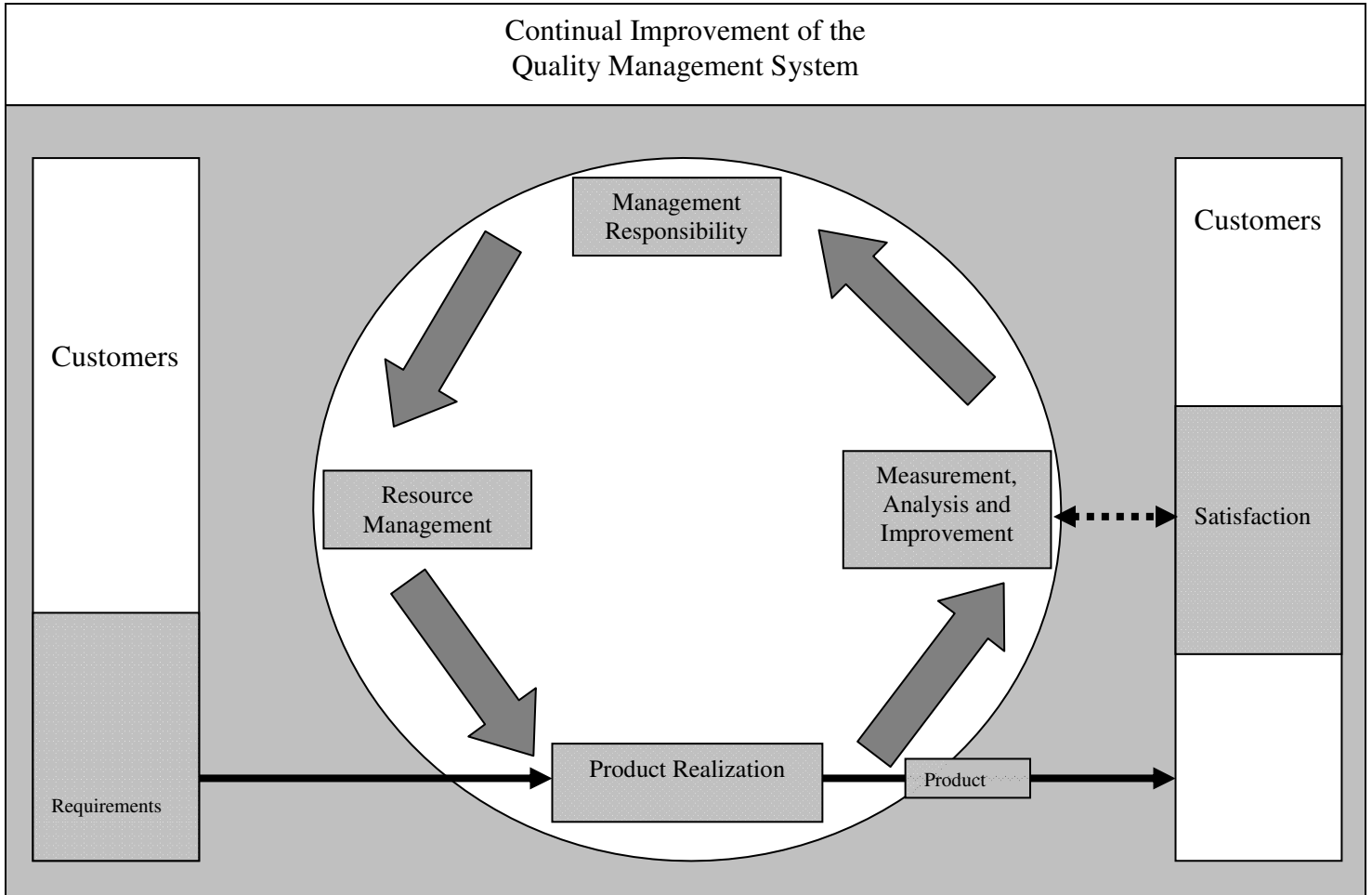
Abtrex Industries Incorporated was founded in 1969 as a supplier to the metal processing industry. Since its conception, Abtrex Industries has evolved by furthering its capabilities, expertise and locations. As a result of strategic planning and advancement, Abtrex Industries now serves clients throughout North America and the world. Four complementary locations provide an unequaled service base for efficient production. Whether your requirements are a minor repair or a complete renovation, you can count on the experienced workforce of Abtrex Industries to promptly provide the necessary remedy. Abtrex Industries utilizes all four of its locations to enhance production capabilities and meet the most stringent deadlines. Through years of dedicated service, Abtrex Industries has tackled some of the most difficult demands of the manufacturing industry. As the leader in corrosion control, Abtrex Industries continues to expand its capabilities and expertise in order to serve you better.



Quality Manual Introduction

This manual describes the quality systems used by Abtrex Industries, Inc., in the manufacturing of products and services provided.

This manual promotes enhancement of customer satisfaction through the use of a process approach when developing, implementing and improving the effectiveness of the quality management system.



Terms and definitions

The term “organization” used in this quality manual refers to Abtrex Industries, Inc. “Supplier” and “Vendor” are synonymous and refer to the external source used to acquire purchased products and/or services by the organization. Throughout the text of this Quality Manual wherever the term “product” occurs, it can also mean “service.”

4.0 Quality management system

4.1 General requirements

The organization documents, implements and maintains a quality management system and continually improves its effectiveness.

The organization:

- Identifies the processes needed for the quality management system and their application throughout the organization.
- Determines the sequence and interaction of these processes. Determines criteria and methods needed to ensure that both the operation and control of these processes are effective.
- Ensures the availability of resources and information necessary to support the operation and monitoring of these processes.
- Monitors, measures and analyzes these processes.
- Implements actions necessary to achieve planned results and continual improvement of these processes.

Where the organization chooses to outsource any process that affects product conformity with requirements, the organization ensures control over such processes. Controls of such outsourced processes are identified within the quality management system.

4.2 Documentation requirements

4.2.1 General

The quality management system documentation includes:

- Documented statements of a quality policy and quality objectives.
- Quality Manual
- Documented procedures
- Documents needed by the organization to ensure the effective planning, operation and control of its processes.

NOTE 1: Documentation can be in any form or type of medium.

4.2.2 Quality System Procedures

(See appendix)

4.2.3 Control of documents

Documents required by the quality management system are controlled. Records required by the quality management system are controlled. A documented procedure is established to define the controls needed:

- To approve documents for adequacy prior to issue
- To review and update as necessary and re-approve documents
- To ensure that changes and the current revision status of documents are identified
- To ensure that relevant versions of applicable documents are available at points of use

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- To ensure that documents remain legible and readily identifiable
- To ensure that documents of external origin are identified and their distribution controlled
- To prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

4.2.4 Control of records

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

5.0 Management Responsibility

5.1 Management Commitment

Abtrex Management has communicated the importance of the Quality System, regulatory and legal requirements, and customer needs, to the employees and will continue to do so. This is accomplished through:

- Management Review
- Project Reviews
- Employee Training
- Employee Involvement
- Communicating Quality Objectives and Measurements
- Ensuring the availability of resources

5.2 Customer Focus

Abtrex Management shall ensure the customer requirements are defined and met with the goal of improving customer satisfaction.

5.3 Quality Policy

Abtrex Executive Management ensures that the Quality Policy:

- Is communicated and understood throughout the organization
- Includes a commitment to comply and continually improve the effectiveness of the Quality Management System
- Establishes and reviews quality objectives and customer satisfaction

5.4 Planning

5.4.1 Quality Objectives

Abtrex management ensures that quality objectives, including those needed to meet requirements for product, are established at relevant functions and levels within the organization. The quality objectives are measurable and consistent with the quality policy.

- Meet or exceed customer expectations by effective communication and review of customer requirements.
- Provide our customers high quality products and services, on time delivery, and at a reasonable cost.
- Effectively manage our products, processes, and services to provide superior customer satisfaction.
- Promote the safety, awareness, and well being of employees through training and education

5.4.2 Quality Management System Planning

Quality Management System Planning is carried out as to meet the requirements of section 4.1 and to define quality objectives. The integrity of the system is maintained when changes are planned and implemented through a review and approval process.

5.5 Responsibilities, Authority and Communication

5.5.1 Responsibility and Authority

All members of Management are responsible for implementing, and maintaining the quality systems and procedures within their respective areas of authority. Responsibilities are defined in the organization chart.

5.5.2 Management Representative

Executive Management has appointed a management representative who, irrespective of other responsibilities, oversees the Quality Assurance Group/Function of the company. Quality Assurance has the responsibility of establishing, implementing, and maintaining a quality system. QA is responsible for reporting on the performance of the quality system to Executive Management. Executive Management will use the information as a basis for improvement of the quality system. Customer requirements will be reviewed during contract review, management quality meetings, design meetings and continuous improvement meetings.

5.5.3 Internal Communication

Communication between all personnel in regards to the Quality System is achieved through documentation of the system, reviews, and meetings between all personnel.

5.6 Management Review

5.6.1 General

Top management reviews the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. The review includes assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

5.6.2 Review Input

The input to management review includes information on:

- Results of audits
- Customer feedback
- Process performance and product conformity
- Status of preventive and corrective actions
- Follow-up actions from previous management reviews
- Changes that could affect the quality management system
- Recommendations for improvement

5.6.3 Review Outputs

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

- Improvement of the effectiveness of the quality management system and its processes
- Improvement of product related to customer requirements
- Resource needs

6.0 RESOURCE MANAGEMENT

6.1 Provision of Resources

Abtrex determines and provides the resources needed to implement and maintain the quality management system and continually improve its effectiveness, and to enhance customer satisfaction by meeting customer requirements.

6.2 Human Resources

6.2.1 General

All personnel at Abtrex will be trained, educated, and have adequate experience to ensure they fulfill their responsibilities.

6.2.2 Competence, Awareness and Training

The organization:

- Determines the necessary competence for personnel performing work affecting product quality.
- Provides training or takes other actions to satisfy these needs.
- Evaluates the effectiveness of the actions taken.
- 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.
- Maintains appropriate records of education, training, skills and experience.

6.3 Infrastructure

Abtrex determines, provides for, and maintains the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable:

- Buildings, workspace and associated utilities
- Process equipment, both hardware and software
- Supporting services such as transport or communication

6.4 Work Environment

Abtrex determines and manages the work environment needed to achieve conformity to product requirements.

7.0 PRODUCT REALIZATION

7.1 Planning of Product Realization

To plan, control, approve, monitor and set standards to prevent problems which may arise during order processing, manufacturing and shipping. These processes will be scheduled, planned and carried out under controlled conditions. For example:

- Work Instructions, and acceptance/rejection criteria
- Keeping records to support conformity of the process.
- Development of process control and plans for key characteristics as required by the customer.
- Product standards, representative samples and illustrations as appropriate

In planning product realization, the organization determines the following, as appropriate:

- Quality objectives and requirements for the product
- The need to establish processes, documents, and provide resources specific to the product,
- Required verification, validation, monitoring, inspection and test activities specific to the product and the criteria for product acceptance, and
- Records needed to provide evidence that the realization processes and resulting product meet requirements.

7.2 Customer Related Processes

7.2.1 Determination of requirements related to the product

Abtrex will determine what requirements are needed to fulfill the customer's needs during the Request for Quote and order processes. These requirements will include:

- Delivery times
- Engineering and test support
- Regulatory and legal requirements are identified.
- Requirements not stated by the customer but necessary for specified or intended use, where known.
- Customer specific requirements.
- Material and manufacturing process requirements.

7.2.2 Review of requirements related to product

Abtrex will review the requirements needed to fulfill the customer's needs during the Contract Review processes. This review is conducted prior to Abtrex's commitment to supply the product or service to the customer. To ensure that our customers get what they requested on time, traceable, and to the quality they expect from Abtrex, procedures will provide that:

- Customer's requirements are unambiguous, clearly defined and documented.

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- Abtrex can meet customer requirements.
- Changes to customer requirements are resolved, documented and communicable to all persons affected by the changes.
- The customer will be contacted to resolve any discrepancy found during the review period.
- Any amendment to the contract will be represented by documents approved by both the customer and Abtrex.

7.2.3 Customer Communication

Customer contact is the main responsibility of Project Management. Communication between Abtrex and its customer is to ensure that any updates, amendments, additions, etc. are handled effectively. This will also include any customer complaints, feedback, and/or product requirements.

Where applicable information derived from previous similar designs will be utilized when not in conflict with non-disclosure agreements.

7.3 Design and Development - NOT APPLICABLE

Abtrex does not plan and control the design and development of any products. This is our Customer's responsibility.

7.4 Purchasing

7.4.1 Purchasing Process

The organization ensures that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product is dependent upon the effect of the purchased product on subsequent product realization or the final product.

The organization evaluates and selects suppliers based on their ability to supply product in accordance with the organizations requirements. Criteria for selection, evaluation and re-evaluation are established.

7.4.2 Purchasing Information

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

- Requirements for approval of product, procedures, processes and equipment
- Requirements for qualification of personnel
- Quality management system requirements.

The organization ensures the adequacy of specified purchase requirements prior to their communication to the supplier.

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7.4.3 Verification of Purchased Products

The organization establishes and implements the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements. Where the organization or its customer intends to perform verification at the supplier's premises, the organization states the intended verification arrangements and method of product release in the purchasing information.

7.5 Production and Service Provision

7.5.1 Control of Production and Service Provision

As applicable, the organization plans and carries out production and service provisions under controlled conditions. Controlled conditions include:

- The availability of information that describes the characteristics of the product
- The availability of work instructions, as necessary
- The use of suitable equipment
- The availability and use of monitoring and measuring devices
- The implementation of monitoring and measurement activities
- The implementation of product release, delivery and post-delivery activities

7.5.2 Validation of Processes for Production and Service Provision

Any specific processes identified at Abtrex will be qualified prior to use and their process parameters defined. For example:

- Ensure that all equipment requirements are identified, and that equipment and facilities meet those requirements.
- Identify all process factors (potential variables) that may affect the capability of the product or service to meet customer product quality requirements.
- Evidence that material specifications are compliant.
- Record of periodic re-validation.

7.5.3 Identification and Traceability

Where appropriate, the organization identifies the product by suitable means throughout product realization. The organization identifies the product status with respect to monitoring and measurement requirements. Where traceability is a requirement, the organization controls and records the unique identification of the product.

7.5.4 Customer Property

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All customer-supplied material (CSM) shall be identified and protected from unauthorized use or disposition. CSM will include tooling, drawings, electronic files, parts and raw materials. Abtrex documented procedures shall be established so that CSM shall be examined, upon receipt for:

- Damage
- Quantity
- Completeness and the correct material or characteristic
- Any discrepancy shall be reported to the customer who supplied the materials.
- Proper precautions will be taken and inspection performed to assure that no damage or deterioration occurs during storage.

7.5.5 Preservation of Product

The organization preserves the conformity of product during internal processing and delivery to the intended destination. This preservation includes identification, handling, packaging, storage and protection. Preservation also applies to the constituent parts of a product.

7.6 Control of Monitoring and Measurement Devices

All Measuring test equipment which could affect the quality of the finished parts will be calibrated by an external sub-contractor or in-house, in accordance with Abtrex procedures. Abtrex will also ensure that:

- Basis for calibration is traceable to a national standard.
- Inspection and test equipment affecting quality will be listed.
- Records of calibration will be maintained with positive recall provisions.
- Procedures will explain what to do with previous results when equipment is found out of calibration.
- Abtrex calibration will be conducted in a suitable environment.
- Abtrex equipment will be handled, cleaned, maintained and stored properly.
- Adjustments to equipment will be recorded.
- Inspection measuring and test equipment shall also include any personal tools used for final verification.

8.0 MEASUREMENT ANALYSIS AND IMPROVEMENT

8.1 General

The organization plans and implements the monitoring, measurement, analysis and improvement processes needed:

- Demonstrate conformity of the product
- Ensure conformity of the quality management system
- Continually improve the effectiveness of the quality management system.

This includes determination of applicable methods, including statistical techniques, and the extent of their use.

Abtrex will monitor and measure:

- Customer Satisfaction
- Quality Management System (Internal Audit)
- Process
- Product
- Continual Improvement
- Corrective Action
- Preventive Action
- Control of non-conformities

8.2 Monitoring and Measurement

8.2.1 Customer Satisfaction

Abtrex will review customer satisfaction as part of the management reviews and corrective action system to implement continuous improvements. Methods of obtaining and using customer satisfaction and/or dissatisfaction information may include the following:

- Customer complaints
- Customer returns
- Questionnaires and surveys
- Direct customer communication
- Customer visits
- Trade association information
- Industry group information
- Previous audits
- Corrective action noted during audits

8.2.2 Internal Audit

Abtrex conducts internal audits at planned intervals to determine whether the quality management system:

- Conforms to the planned arrangements, and to the quality management system requirements established by the organization
- Effectively implemented and maintained.

An audit program is planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the

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results of previous audits. The audit criteria, scope, frequency and methods are defined.

The management responsible for the area being audited ensures that actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow-up activities include the verification of the actions taken and the reporting of verification results

8.2.3 Monitoring and Measurement of Processes

All processes at Abtrex will be monitored to ensure that they are suitable to ensure the customer requirements are being met. This will be achieved through the internal audit program and the inspection process. In addition, continuous improvement practices will be realized during the internal audit process.

8.2.4 Monitoring and measurement of production

Abtrex monitors and measures the characteristics of the product to verify that product requirements have been met. This is done at appropriate stages of the product realization process in accordance with the planned arrangements. Proof of conformity with requirements is maintained. Records indicate the person authorizing release of product. Product release and service delivery does not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by the customer.

8.3 Control of Nonconforming Product

Abtrex policy is to identify and document all non-conformances.

Non-conforming material is defined as any material or component, or assembly, which does not conform to product specifications, engineering drawings, or associated quality standards. Any material or assembly that is suspected of being non-conforming shall be considered non-conforming until proven otherwise.

Non-conforming material will be identified, documented, evaluated and prevented, from being used or shipped. Responsibility for disposition of non-conforming product will be defined, and when required, the customer is contacted. Procedures are established and maintained that prevent the inadvertent use of non-conforming material or product.

8.4 Analysis of Data

Abtrex 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. This includes data generated as a result

of monitoring and measurement and from other relevant sources. The analysis of data provides information relating to:

- Customer satisfaction
- Conformity to product requirements
- Characteristics and trends of processes and products including opportunities for preventive action, and suppliers.

8.5 Improvement

8.5.1 Continual Improvement

Abtrex has a documented system in place, which uses a planned approach to solving and implementing continuous improvements. This data may include:

- Result of internal audits
- Corrective action log
- Management review
- Analysis of data
- Quality policy

Abtrex will utilize this data to make improvements to the quality systems. Continuous Improvement is one of the agenda items at management review.

8.5.2 Corrective Action

Abtrex has a documented system for taking corrective action to eliminate causes of non-conformance. Corrective actions ensure the effective handling of customer complaints and product non-conformities. They may aid in identifying the causes of non-conformities relating to product process(s). Determination of the corrective action is made and controls incorporated insure that the corrective action taken is implemented. Follow-up on the effectiveness of actions taken will be completed as part of the next internal audit. An action will be taken when appropriate to prevent the recurrence of the problem.

8.5.3 Preventive Action

Abtrex will identify areas of potential improvements and actions to be taken to prevent non-conformance. This will be done as part of our Internal Audit, Management Reviews and Continuous Process Improvement/Preventive Action process(s).