# SMALL TUBE PRODUCTS



# Quality Manual
(in accordance with ISO 9001)


Revision 034 dated July 22, 2021





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# STATEMENT OF QUALITY MANUAL APPROVAL

The Small Tube Products' Quality Manual is considered the top level document for managing our ISO 9001-based Quality Management System. This manual describes the quality management system, the inter-relationships of personnel and activities within the management system, and references procedures and controls that comprise the system.

The Quality Manual, Revision 034, dated July 22, 2021 has been reviewed and approved for use by the President/CEO and Quality Supervisor.


Vince Bushell                                                  Elizabeth Malone
President/CEO                                               Quality Supervisor


July 22, 2021

## 4 Organizational Context

Small Tube Products maintains a Quality Management System compliant with the requirements of the ISO 9001 standard. The scope of Small Tube Products' quality management system is:

> "A manufacturer of non-ferrous metal tubing with fabrication capabilities for tubular parts to a wide variety of different industries."

This scope was determined by Small Tube Products' management and it considers:
   A. External and internal issues that are relevant to its purpose and its strategic direction;
   B. The requirements of interested parties, including but not limited to, customers, regulatory bodies, stakeholders, and employees of Small Tube Products;
   C. The products and services of the organization and the enhancement of customer satisfaction by providing said products and relevant services.

Small Tube Products has established, documented, implemented, and maintains an effective quality management system and continually improves that effectiveness by measures discussed in this Quality Manual.

Per the requirements of the standard, Small Tube Products has:

   A. Determined the processes needed for the quality management system, as well as the inputs required and the outputs expected for the aforementioned processes;
   B. Determined the sequence and interaction of these processes (see Section 8.1, flowchart below);
   C. Determined criteria and methods needed to ensure that both the operation and control of processes are effective through monitoring and measurement;
   D. Ensured that adequate resources, human and material, have been assigned to all levels of the organization;
   E. Assigned the responsibilities and authorities of these processes;
   F. Addressed the risks and opportunities to enhance desirable effects, prevent undesirable effects, and achieve improvement;
   G. Evaluated these processes and implemented any changes to ensure that these processes achieve their intended results;
   H. Continually improve the processes and the quality management system.

To demonstrate compliance to the above, Small Tube Products maintains documentation and records as required by this manual (see section 7.5).

## Quality Management System
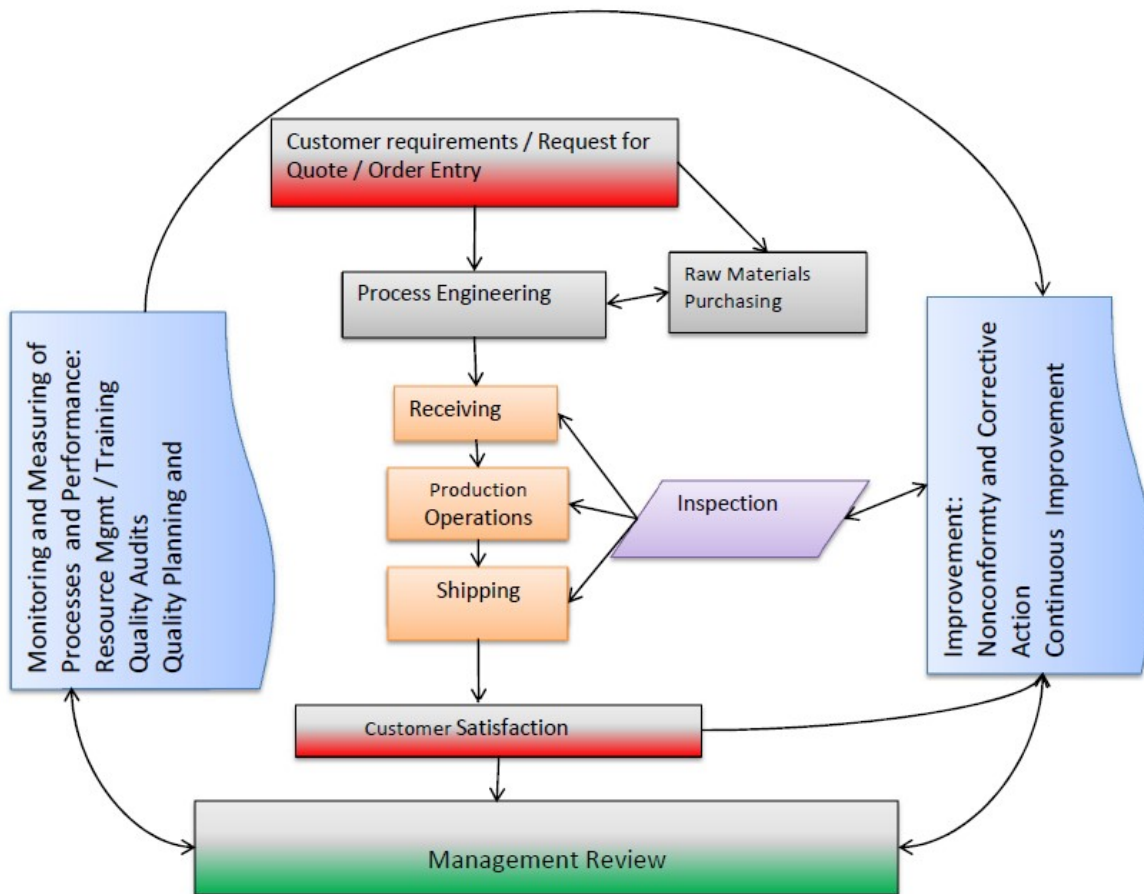


5       **Leadership**

5.1     **Leadership and Commitment**

Senior management shall demonstrate leadership and commitment to the development, implementation, and continual improvement of the quality management system by:
  A. Taking accountability for the effectiveness of the quality management system;
  B. Ensuring that the quality policy is established and suitable (see section 5.2) and the quality objectives, otherwise known as the business performance measures, are measurable and attainable (see Section 6.2);
  C. Ensuring the integration of the quality management system requirements into the organization's business processes;
  D. Conducting management reviews;
  E. Promoting the use of the process approach and risk-based thinking;
  F. Ensuring that the resources, human and material, are appropriate and available;

    G. Communicating the importance of effective quality management as well as the importance of conforming to requirements of the system, requirements of the customer, and regulatory and statutory requirements;

    H. Ensuring that the quality management system achieves its intended results;

    I. Engaging, directing and supporting persons to contribute to the effectiveness of the quality management system;

    J. Promoting improvement; and

    K. Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibilities.

### 5.1.2 Customer Focus

Small Tube Products' management maintains a strict approach to determining, understanding and meeting all customer requirements. See POP OPC. The Quality and Customer Service Departments take a proactive approach to ensure full customer satisfaction and solicits customer feedback regularly (See SOP 403-23).

### 5.2 Policy

Senior management has developed a quality policy that encompasses the purpose of the organization and sets a commitment to satisfy the requirements of its customers and its own internal objectives. The Small Tube Products' Quality Policy is:

"Meeting customer expectations while preventing errors through continuous improvement."

This policy is communicated via controlled postings throughout the facility, but also communicated to customers and other relevant parties through this Quality Manual and the Small Tube Products website. Personnel from all levels of the organization are expected to understand and apply the policy. The policy is reviewed for suitability during management review (see Section 9.3, Form 9300).

### 5.3 Organizational Roles and Responsibility

Senior management ensures that the responsibilities and authorities to realize the organization's objectives are assigned, communicated and understood within the organization; these objectives are communicated and defined on the appropriate job descriptions. The Quality Supervisor is responsible for implementing and maintaining the quality management system. That position is furthermore responsible for:

    A. Ensuring compliance of the system to the ISO-9001standard;

    B. Measuring and communicating quality objectives to the organization;

    C. Reporting on the performance of the quality management system to Senior Management via semi-annual management reviews;

    D. Ensuring the promotion of customer focus;

    E. Ensuring that the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

**6      Planning**

POP QPL details the planning of actions to address risks and opportunities.   Risks and opportunities may stem from external or internal issues.  External issues may include, but are not limited to, legal risks, technological opportunities or opportunities to maintain competitiveness in the industry.  Internal issues may include, but are not limited to, found non-conformances and observations (see POP's CA and PA).  Small Tube Products uses multiple means to address, implement actions and evaluate effectiveness of said actions (POP QPL).

POP QPL details how quality objectives are established, measured and achieved.

**7      Support**

**7.1.   Resources**

Small Tube Products has determined the resources needed to implement and maintain the quality management system, continually improve its effectiveness, and meet customer requirements.

POP TR describes how the organization determines the required competence and training for personnel at all levels.

POP IWE details how the organization determines, provides, and maintains infrastructure and the environment necessary for the operation of its processes and to produce satisfactory product.

**Monitoring and Measuring Resources**

Small Tube Products has determined and provided equipment necessary to verify product conformance.    POP CMD and therein referenced SOP's detail how these are controlled, calibrated, stored, and documented.

Small Tube Products ensures adequate measurement traceability for all its internally calibrated instruments.   External calibration certificates are reviewed by the Quality Supervisor and verified to have traceability to a national standard where possible.

**Organizational Knowledge**

Small Tube Products has determined the knowledge necessary for the operation of its processes by its history of manufacturing satisfactory product.   Records of manufacture are maintained and readily available.   Training is performed per section 7.2 below and POP TR, and uses experienced and qualified personnel to perform training.  Other knowledge may be acquired externally through attendance of trade shows, updates to material specifications, updates to technology, and through communication with customers and suppliers.

**7.2    Competence**

Small Tube Products has established POP TR to specifically address competence, awareness, and training.   Small Tube Products uses a comprehensive hiring and subsequent training process to ensure individuals are capable of the job in which they are performing.   It is the responsibility of the Human Resources Department, with assistance from other departments where needed, to administer training, ensure competence of individuals based on the performed training (education and experience if warranted by job description), retain documented evidence of training, and evaluate the effectiveness of training.

**7.3    Awareness**

The STP training process is intended to instill in personnel the relevance and importance of their activities and how they contribute to the overall quality system. See POP TR for further explanation.

**7.4    Communication**

Internal communication methods have been established to ensure effective communication regarding the quality system.   Daily production meetings are held with senior management and production supervisors that include a report of quality issues as communicated by the Quality Supervisor.  Weekly start-up meetings are held with all hourly employees to communicate information, and information boards have been established in key areas to provide pertinent information as well.   The state of the quality management system is communicated with senior management during the management reviews (see Section 9).     Individuals with email access receive communication electronically.

External communication with customers is handled primarily through the Customer Service Department, with assistance from other departments as needed.  External communication with vendors is handled through purchasing, with assistance from other departments as needed.   The Quality Department also communicates with customers and vendors as it applies to product quality and/or Quality Management Systems.    External communication includes, but is not limited to, inquiries, quotes, purchase orders, invoicing and correspondence as it relates to these items.

**7.5    Documented Information/Control of Documents**

Small Tube Products has established POP CD to detail its procedure of document and record control.

Small Tube Products utilizes the following documents to demonstrate evidence to the ISO 9001 standard.   Those documents include:
> A.  Quality Manual, which includes herein:
>> 1.  the scope of the quality management system,
>> 2.  the procedures for the quality management system or reference to them, and

3. a description of the interaction between the processes of the quality management system.
   B. Documented Quality Policy and Quality Objectives,
   C. Plant Operating Procedures (POP's), the second level procedures which supplement the Quality Manual by providing detail to implement the quality management system,
   D. And other documents determined to be necessary to ensure effective planning and operation. These include, but are not limited to, documents referenced in POP CD.

Small Tube Products uses an electronic database, known as the STP Quality Document Management System, to control its documents, assign form numbers, titles, and revision levels, and maintain electronic signatures of review and approval. The document itself contains a procedure location (if applicable) to ensure that it is available at point of use, and is otherwise controlled per POP CD in areas where computer access is not readily available. Revised documents shall also contain a log of changes and the most recent change is made apparent by italicized and bold print. Records are controlled and maintained per POP CD.

## 8      Operation

## 8.1     Operational Planning and Control / 8.2 Requirements for Products and Services

Small Tube Products has established POP OPC, Operational Planning and Control, to detail how the organization plans, implements and controls the processes to meet customer requirements. These requirements for the planning of product include communication with the customer (request for quotes, purchase orders, customer supplied drawings, etc.), the determination of the requirements of the product (alloy, size, temper, etc.), and the review of those requirements. It furthermore outlines how the requirements are translated into work orders.

Additional Plant Operating Procedures (POP's) to support this section of the QMS include:
   POP CPS – Control and Validation of Production and Service Provision
   POP CP – Customer Property
   POP MPD – Monitoring and Measuring of Product
   SOP 403-23 – Customer Satisfaction
   And various Standard Operating Procedures (SOP's) referenced in the above POP's.

## 8.3     Design and Development of Products and Services

Small Tube Products is a manufacturer of tube that is custom-made to its customers' specifications. The organization does not design tube but rather works from the design of its customers. In the event that a customer is agreeable to procure a tube from STP-owned tooling, STP will supply a CAD drawing for customer approval, and POP OPC is followed.

**8.4  Control of Externally Provided Processes, Products and Services (Purchasing)**

Small Tube Products has established POP PRC to ensure that purchased products and services conform to requirements.

    A.  The following are the types of purchases performed by Small Tube Products:
        1.  Non-metals (MRO) purchasing
            a.  Critical-to-Quality supplies (used in the direct manufacture of product),
            b.  Subcontracted services,
            c.  Other supplies necessary to the effectiveness of the organization, but not used in the direct manufacture of product.
        2.  Raw Material Purchasing
            a.  Raw material used for the production of product,
            b.  Raw material billets used to form tubing,
            c.  Raw material for distribution (buy/resell).
    B.  Small Tube Products has adequate controls to ensure that these externally provided products and processes are suitable and appropriate and within the control of the quality management system by:
        1.  Using vendors on the Approved Vendors Lists (where applicable),
        2.  Following POP PRC for the approval and disqualification of suppliers,
        3.  Generating purchase orders that adequately define the product or service required,
        4.  Performing periodic raw material supplier evaluations,
        5.  Verifying and inspecting products/services and applicable paperwork per POP PPV.

**8.5  Production and Service Provision**

**8.5.1  Control and Validation of Production and Service Provision**

Small Tube Products has established POP CPS for the implementation of production and service provision.  Small Tube Products exercises control by the use of product-specific documents which detail the characteristics of the product.   All products are inspected at appropriate stages per the applicable mill order traveler, standard operating instruction, and/or quality plan. Additionally, all products are subjected to final inspection verification prior to shipment when delivery and post-delivery activities commence.  Multiple inspection points and means of inspection as well as the use of electronic media are provided to avert the potential of human error and further validate the process.

**8.5.2  Identification and Traceability**

Small Tube Products has established POP ID to explain how identification and traceability are handled.  Identification is handled by use of tags and mill order travelers. Traceability is maintained to the originating raw material lot and a unique mill order number.   The use of mill order travelers (as well as other documentation and computer inputs where applicable) are used

to identify the product status and results of in-process inspections.

### 8.5.3   Property Belonging to Customers or External Providers

Small Tube Products handles customer property in the same manner as company-owned material in regards to verification, storage, and handling.  POP CP outlines the procedures for identifying customer material.

### 8.5.4   Preservation

Small Tube Products practices product preservation during production, shipping, and delivery of material.   Material is adequately identified per POP ID and handled appropriately per the packaging and shipping instruction.

### 8.5.5   Post-delivery Activities

See POP CPS regarding post-delivery activities.

### 8.6     Release of Product

Small Tube Products utilizes final product verification prior to shipment.   This final verification is performed by quality department personnel following POP MPD and SOP 803-5; the inspection record in the STP System shows evidence of material conformance and traceability to the inspector authorizing product to ship.

### 8.7     Control of Nonconforming Product

Small Tube Products has established POP NC to detail its control of nonconforming product, including identification and taking adequate measures to prevent delivery.   POP CA details the corrective action procedure which is followed in the event of a discovered nonconformance and the verification of resultant corrective action.   SOP 403-14 details the procedure for an external complaint of nonconforming product.

Small Tube Products controls nonconforming product by:
A.  Taking corrective action (POP CA) to eliminate the nonconformity,
B.  Segregating, containing, or returning if necessary, the material and properly identifying it as non-conforming,
C.  Informing the customer if a deviation is deemed necessary and authorizing its use under concession,
D.  By taking action when the nonconformity is detected after delivery (SOP 403-14),
E.  By taking action if the product does not meet its intended application, and
F.  Obtaining authorization for the disposition of material.

Small Tube Products retains documentation through various means as established in POP NC.

## 9        Performance Evaluation

### 9.1.1  Monitoring and Measurement

Small Tube Products has established procedures for the monitoring and measurement of processes (POP MPC) and monitoring and measurement of product (POP MPD).   A corrective action is taken in the event that nonconformity is found.    The organization has effectively implemented these procedures to demonstrate product conformity, and to ensure the conformity and continual improvement of the quality management system.

Small Tube Products has established POP CMD for the Control of Monitoring and Measuring Devices.

### 9.1.2  Customer Satisfaction

Customer satisfaction is monitored and reviewed per SOP 403-23.

### 9.1.3  Analysis and Evaluation

Data is collected, analyzed and evaluated by the following means and referenced procedures:
   A. Products, by final verification, per SOP 803-5;
   B. Customer satisfaction per approaches in SOP 403-23;
   C. Quality management system and improvement thereof, analyzed and evaluated by the performance of third-party and internal audits per Section 9.2 and POP IA;
   D. Effectiveness of planning, analyzed and evaluated by the achievement of metrics per POP QPL;
   E. Effectiveness of actions taken to address risks and opportunities, as described in POP PA; and
   F. Supplier Performance, as analyzed and evaluated in POP PRC, and
   G. The need for improvements to the Quality Management System, as considered during the Management Review (Section 9.3).

Documentation is retained per the STP Quality Document Management module.

### 9.2     Internal Audit

Small Tube Products performs internal audits to ensure that the quality management system conforms to the requirements of this quality manual, internal procedures and the ISO 9001 standard.  POP IA details the full procedure for internal auditing.

**9.3    Management Review**

Management Reviews are performed semi-annually at a minimum with members of Senior Management to review the quality management system and ensure its continuing stability, adequacy, effectiveness and alignment with the strategic direction of Small Tube Products.   The meeting minutes and supporting documentation are retained per the STP Quality Document Management module.   The Quality Supervisor facilitates the meeting using Data Form 9300 to ensure all required elements are addressed.

**10     Improvement**

Small Tube Products practices continuous improvement to enhance its products, customer satisfaction, quality management system and its internal processes.   These continuous improvement efforts include corrective and preventive actions (see POP's CA and PA), improvement to products and services, and improving the performance and effectiveness of the quality management system.

**10.2   Nonconformity and Corrective Action**

When a nonconformity occurs, Small Tube Products reacts to the nonconformity by performing corrective action.   The procedure for this action is detailed in POP CA.

**10.3  Continual Improvement**

Small Tube Products continually improves the suitability, adequacy, and effectiveness of the quality management system.   The procedure followed is detailed in POP PA.

## 11 Record of Manual Amendments

| SECTION | DESCRIPTION OF AMENDMENT | REV./DATE | APPROVAL |
|---|---|---|---|
| Sec 4<br>Sec 5 | Added "training" into process diagram<br>Revised quality policy statement | 029  5/13/11 | JJB |
| Sec 4<br>Sec 6<br>Sec 7<br>Sec 8 | Revised Mgmt Review/Improvement Process Chart<br>Removed A-H of sec 6.3,added refer to POP 6.3 sec 5.1<br>Revised section 7.5.1D<br>Revised Section 8.2.1 to include SOP 403-23. | 030 09/09/13 | JJB |
| All | Entire document (w/exception to TOC and Vision and Mission Statement) revised to better align with ISO 9001-2008; Added Scope to Quality Manual; Formatting and grammatical changes on all sections. | 031 07/28/15 | EAM |
| All | Entire document revised to align with ISO 9001:2015 | 032 12/12/16 | EAM |
| Section 4<br>Section 7.4, 8.6<br>S.Q.A, All | Revised flowchart based on OFI during 8/19 IA; Sections revised to reflect current practice.<br><br>Revised to reflect mgmt. change, remove multiple references to Quality Manager | 033 9/20/19 | EAM |
| All | No change to context; revised signatories for digital approval and added uncontrolled copy note.    Minor formatting changes throughout. | 034 7/22/21 | EAM |