

*Technical  
Manufacturing  
Corporation*  
(TMC)



**Quality Management System  
Requirements**

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## **2. ABOUT OUR QUALITY MANAGEMENT SYSTEM**

### ***2.1 Purpose***

The purpose of this document is to identify the Quality System and policies of Technical Manufacturing Corporation, hereafter known as TMC or “the company”.

### ***2.2 Scope***

The requirements and policies described herein have been modeled after the ISO 9001:2015 Standard, the internationally accepted standard for Quality Management Systems Requirements. It is applicable to all TMC employees and persons who work at TMC.

### ***2.3 Responsibility***

The Vice President and Business Unit Manager has overall responsibility for ensuring that TMC’s quality management system is effectively implemented and remains consistent with the strategic direction of the company.

The Quality Leader is responsible for ensuring that TMC’s quality management system conforms to the requirements of the ISO 9001 standard.

### ***2.4 Distribution and Control***

The Quality Management System Requirement document will be distributed according to its document register. Authorization and control of changes will follow the requirements specified in the standard operating procedure *Document, Data and Quality Records Control Procedure*. Any copies distributed outside of the company will be considered uncontrolled.

## **3. SCOPE OF THE QUALITY MANAGEMENT SYSTEM**

Technical Manufacturing Corporation’s scope of registration for the ISO 9001 system is for the design, manufacture and delivery of vibration isolation systems and related equipment. Service activities are excluded from the TMC quality system as it is not a specified customer requirement and is not applicable to TMC operations.

TMC is a quality minded, leading designer and manufacturer of vibration isolation systems including desktop isolated microscope bases, STACIS® active vibration cancellation systems, STACIS® iX SEM-Base™ floor platforms, STACIS® iX LaserTable-Base™ hybrid piezoelectric/air active vibration cancellation systems, and Mag-NetX™ magnetic field cancellation systems. Products include active and passive vibration isolation systems, optical tops, optical table systems, and breadboards, laboratory tables and table top platforms, floor platforms, electric field shielding systems, and acoustic enclosures. TMC products are everywhere precision research or production is taking place. Our customers fall into a number of categories such as researchers, chipmakers, and OEM suppliers. At TMC we will continue to provide innovative responses to extraordinary challenges.

TMC maintains a documented quality management system which system creates the framework for controlling our processes and enhancing customer satisfaction. TMC strives to continually

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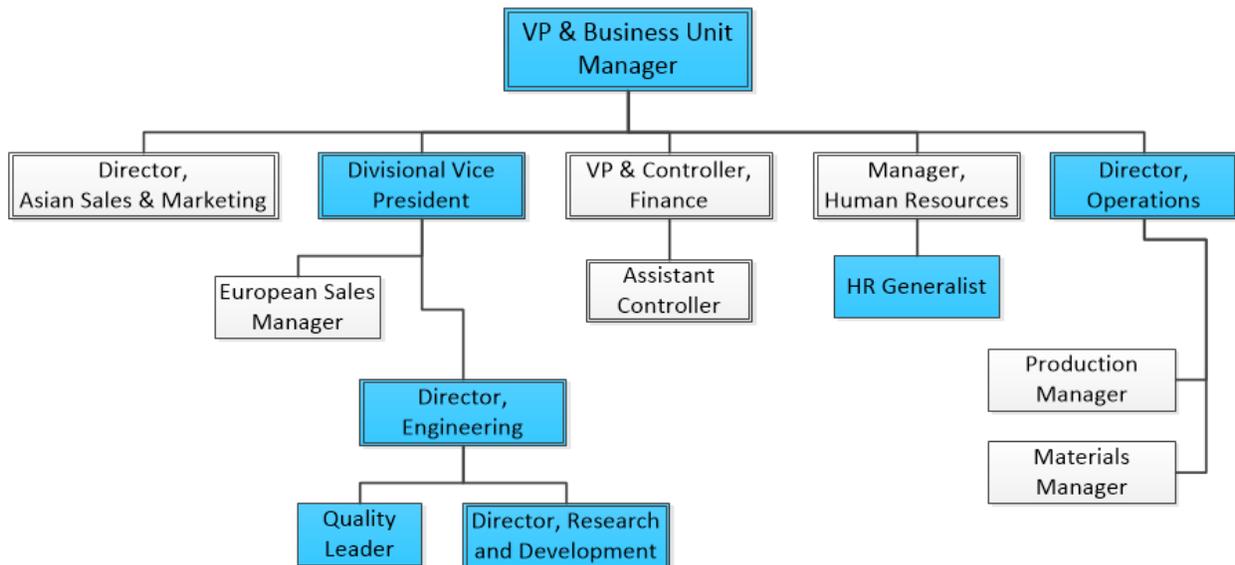
improve the effectiveness of this quality management system. TMC ensures that the required resources are available, that relevant processes are monitored, measured, analyzed, and that appropriate continuous improvements are made. Outsourced processes that affect product conformity are controlled via the purchasing and supplier control process.

TMC is a unit of AMETEK Ultra Precision Technologies, a pioneer in the development of ultra precision measurement instruments and a global leader in ultra precise machine tools and manufacturing systems for the semiconductor, photovoltaic, nanotechnology, military, defense and ophthalmic lens markets. AMETEK, Inc. is a leading global manufacturer of electronic instruments and electro-mechanical devices.

#### 4. MANAGEMENT STRUCTURE AND QUALITY SYSTEM LEADERSHIP

TMC Management is responsible for establishing, implementing, and maintaining the quality management system. Specific responsibilities include: formulating the quality policy statement, establishing quality objectives, communicating to employees and persons who work at TMC the importance of meeting customers and relevant interest parties' requirements, defining the organizational structure, assigning authorities and responsibilities, periodically reviewing the quality system, and making available the resources necessary to maintain the system.

The organizational chart below illustrates the TMC management structure, with key members of the quality system leadership responsible for the overall effectiveness of the quality system highlighted.



The Quality Leader has the organizational freedom and authority to ensure the Quality System is established, implemented, and maintained in accordance with the ISO 9001 requirements. The

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Quality Leader will also act as the primary communication point to any external parties concerning the quality system.

### ***Senior Management***

- Vice President and Business Unit Manager has overall, general responsibility for all business aspects at TMC. The quality system within TMC is implemented and maintained at the direction of the VP, Business Unit Manager.
- Divisional Vice President - TMC Business Segment is responsible for all aspects of Sales and Marketing at TMC including marketing promotion, product management, bids, customer orders, customer complaints, and requests for returns. The Divisional Vice President is also responsible for the Engineering, and Research and Development functions.
- Director of Operations has overall responsibility for the manufacturing operation at TMC, which includes the production, and purchasing functions.
- Director of Engineering provides overall leadership for engineering and R&D efforts, as well as the quality function. The Director of Engineering manages engineering and R&D resources to effectively support Sales, and Production.
- Director of Research and Development (R&D) develops and introduces new ideas and products to TMC's product line following provided guidelines established for the research and development process.
- Vice President and Controller, Finance has overall responsibility for TMC's strategic financial plan and financial compliance, provides guidance on budgeting and working capital optimization.
- Human Resources Manager handles all personnel issues and is also responsible for ensuring that the training function is properly implemented and maintained.

## **5. QUALITY POLICY**

*“Our goal is to consistently meet or exceed customer expectations, and to continually improve on the effectiveness of our quality management system.”*

Every employee and persons who work at TMC is trained to ensure that the Quality Policy is understood, implemented, and maintained. Everyone at TMC participates in achieving the policy objectives which focus on the continual improvement of our Quality System. The quality policy is reviewed at management reviews for continuing suitability.

## **6. QUALITY OBJECTIVES**

TMC Management ensures that relevant Quality Objectives are established. During planning of quality objectives, TMC management will account for the risks and opportunities associated with the various aspects of the quality system, including, but not limited to, customer requirements, and the needs and expectations of interested parties. The established quality objectives will be

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defined in the document *Quality Objectives Specifications*, and be communicated to all relevant personnel. These quality objectives will be measurable and will be consistent with the quality policy statement.

## 7. PROCESS DOCUMENTATION

TMC Management defines the processes needed to meet the requirements and objectives of the quality system. TMC Management also ensures that any planned organization or process changes do not adversely impact the integrity of the system.

To ensure the effective implementation of the processes within the scope of the quality management system, TMC will maintain the documented standard operating procedures listed below.

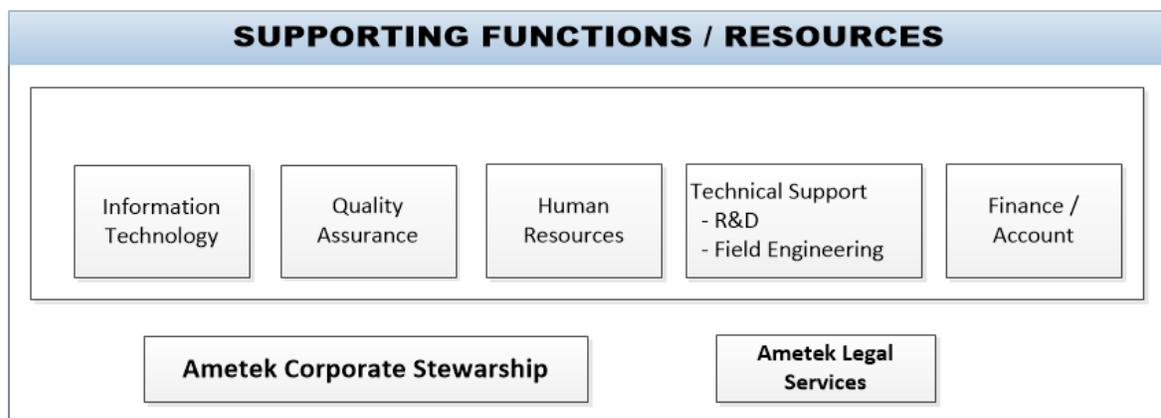
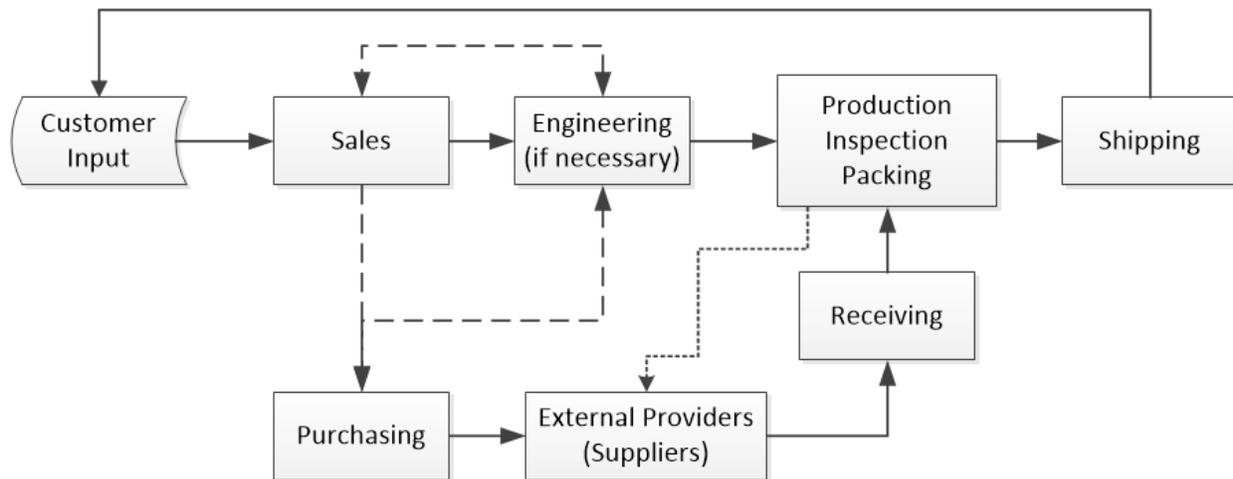
<b>Document Title</b>	<b>Scope</b>
Calibration Procedure	Defines the calibration / verification requirements for applicable measuring equipment.
Customer Complaints and Returns	Defines the process for handling and processing customer complaints and returns, implementing corrective action, applying appropriate disposition to returned products, and analyzing complaints to identify trends.
Document, Data and Quality Records Control Procedure	Defines the methods for controlling the system of documented information put in place to support the effective operation of process and for providing evidence of conformity to requirements.
Drawings and Material Lists Control Procedure	Defines the process for controlling and maintaining the engineering drawings/ specifications and material lists necessary for the production of products.
Internal Auditing	Defines the planning, implementation, documentation, and control of the Internal Quality Audit process.
Management Review Procedure	Outlines the process for conducting planned reviews of the entire quality management system.
Nonconformance Control and Corrective Action	Defines the process for the documentation, identification, and disposition of nonconforming products and implementation of corrective actions.
Order Processing Procedure	Defines the requirements for review and processing of customer orders as well as request for quotations.

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<b>Document Title</b>	<b>Scope</b>
Production and Quality Control Procedure	Defines the process for provision of production including release of products at the different stages of production. This document also defines the requirements for maintenance of applicable production equipment and tools.
Purchasing and External Provider Control Procedure	Defines the procurement process for externally provided processes, products and services, as well as the criteria for selection, evaluation and control of external suppliers.
Research and Development Procedure	Defines the requirements and controls applied to design and development activities. The procedure outlines requirements from initiation and all the way through the different stages of development of new products.
Receiving and Shipping Procedure	Defines the requirements for receiving of external provided products and services including required incoming inspection, and the handling, preservation and shipping of finished products.
Training Procedure	Defines the process for indoctrinating new employees and persons who work at TMC into TMC, and for continual assessment and review of competence.

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The flowchart below depicts the typical sequence and interaction of the TMC processes for provision of products.



## 8. RETENTION OF RECORDS

In line with the requirements of the ISO 9001:2015 Standard, TMC will ensure that, at minimum, the following records are retained and adequately safeguarded to provide evidence of conformity to requirements. Applicable retention periods are specified in the standard operating procedure for *Document, Data and Quality Records Control*.

### **Clause 7 - Support**

Monitoring and measuring equipment calibration records  
 Records of training, skills, experience and qualifications

### **Clause 8 - Operation**

Product/service requirements review records (*contract review*)  
 Record of design and development outputs review

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Records of design and development inputs

Records of design and development controls (design review, verification, validation activities)

Records of design and development outputs

[Engineering] Design changes records

Records of the evaluation, selection, monitoring of performance and re-evaluation of external providers (suppliers)

Records of test and/or inspection of products with acceptance criteria

Record necessary to enable traceability when it is a requirement

Records about customers or suppliers' property in case of lost, damage or being rendered unusable

Records of changes to production process, as applicable

Record of nonconforming products

***Clause 9 – Performance Evaluation***

Monitoring and measurement results as defined in the *Quality Objectives Specifications*

Records on the implementation of the internal quality system audit program

Results of internal quality system audits

Results of the quality system management review

***Clause 10 - Improvement***

Results of corrective actions associated with nonconforming products, and customer complaints