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INTRODUCTION

Texas International Oilfield Tools, LTD, hereafter known as TIOT, has developed and implemented a Quality Management System in order to document its best business practices, better satisfy the requirements and expectations of its customers, and improves the overall management system of TIOT.

The Quality Management System of TIOT meets the requirements of the latest editions of international standards ISO 9001 and API Q1. This system addresses the production, installation, and servicing of our products.

The manual is divided into seven sections that correlate to the Quality Management System sections of API Q1 inclusive of Annex A.

This manual describes the Quality Management System, delineates authorities, inter-relationships, and responsibilities of the personnel responsible for performing within the system. This manual also provides procedures or references for all activities comprising the Quality Management System to ensure conformance to the necessary requirements of the standard.

This manual is used internally to guide our employees through the various requirements of the ISO 9001 and API Q1 standards that must be met and maintained in order to ensure customer satisfaction, continuous improvement, and provide the necessary instructions that create an empowered work force.

This manual is used externally to introduce our Quality Management System to our customers and other external organizations or individuals. This manual is used to familiarize them with the controls that have been implemented and to assure them that the integrity of the Quality Management System is maintained and focused on customer satisfaction and continuous improvement.

Approval: Cheryl Portscheller  Date: 05/07/2018
Management Representative

Approval: Rex Shepperd  Date: 05/07/2018
Owner
1 SCOPE

TIOT provides critical oilfield equipment and tools to the petroleum, petrochemical, and natural gas industries.

This Quality Manual specifies requirements for a quality management system where TIOT needs to demonstrate its ability to consistently provide product that meets customer, API Product Specification 8C and applicable legal requirements with consideration of external and internal issues and requirements of relevant interested parties. It also aims to enhance customer satisfaction through the effective application of the system including processes for continual improvement of the system.

TIOT does not take exclusion to any section of ISO 9001 or API Specification Q1

2 NORMATIVE REFERENCE

The following referenced document is indispensable for the application of this specification. The latest edition of the referenced document (including any amendments) applies.

API Specification Q1
ISO 9001 Quality Management System Requirements
ISO 9000 Quality Management Systems — Fundamentals and Vocabulary

3 TERMS, DEFINITIONS AND ABBREVIATIONS

3.1 Terms and definitions

For the purposes of this manual, the terms and definitions given in ISO 9000 and the following apply. When identical terms are defined in ISO 9000 and this API Q1, API Specification Q1 applies.

3.2 Abbreviations

For the purposes of this manual, the following abbreviations apply.

API American Petroleum Institute
DAC design acceptance criteria
ISO International Organization for Standardization
ITP inspection test plan
KPI key performance indicator
MAC manufacturing acceptance criteria
MOC management of change
QM Quality Manual
QP Quality Plan
QMS Quality Management System
4 QUALITY MANAGEMENT SYSTEM REQUIREMENTS

4.1 Quality Management System

4.1.1 General

TIOT has established, documented, implemented and maintains and continually improves at all times a QMS for all products and servicing provided for use in the petroleum and natural gas industry and measures and improves upon the effectiveness of the QMS in accordance with the requirements of this Quality Manual.

TIOT determines the processes needed for the QMS and their application throughout TIOT and:

a) determines the inputs required and the outputs expected from these processes;

b) determines the sequence and interaction of these processes;

c) determines and applies the criteria and methods (including monitoring, measurements and related performance indicators) needed to ensure the effective operations and control of these processes;

d) determines the resources needed and ensures their availability;

e) assigns the responsibilities and authorities for these processes;

f) addresses the risks and opportunities as determined in accordance with the requirements of (5.2);

g) evaluates these processes and implements any changes needed to ensure that these processes achieve their intended results, and

h) improves the processes and the QMS.

To the extent necessary, TIOT maintains documented information to:

a) support the operation of processes, and

b) have confidence that the processes are being carried out as planned.

TIOT determines external and internal issues that are relevant to its purpose and its strategic direction and that affects its ability to achieve the intended result(s) of its QMS.

TIOT monitors and reviews the information about these external and internal issues.

Due to their impact or potential impact on TIOT’s ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, TIOT determines the:

a) interested parties that are relevant to the QMS, and

b) requirements of these interested parties that are relevant to the QMS.
TIOT monitors and reviews the information about these interested parties and their relevant requirements.

### 4.1.2 Quality Policy

TIOT’s Quality Policy as stated in Appendix A of this Quality Manual has been defined, documented and approved by top management. Top management reviews as part of the Management Review process the quality policy to ensure that it is appropriate to the purpose and context of the organization and is the basis for the development of quality objectives. This policy is communicated, understood, implemented and maintained at all relevant functions and levels within TIOT and interested parties, as appropriate. The policy includes a commitment to comply with requirements and continually improve the effectiveness of the QMS and supports its strategic direction.

### 4.1.3 Quality Objectives

As part of the Management Review process top management establishes measurable Quality Objectives that meet product, service and customer requirements/satisfaction. The quality objectives are measurable, consistent with the quality policy, monitored, communicated and updated as appropriate. TIOT retains documented information on the quality objectives.

When planning how to achieve its quality objectives, TIOT determines what will be done, what resources will be required, who will be responsible, when it will be completed, and how the results will be evaluated.

### 4.1.4 Planning

Management ensures that criteria and methods needed for the operation and control of all QMS processes are determined, managed, and effective and that the planning of the QMS is carried out in order to meet the requirements of API Q1 and ISO 9001 and considers the issues referred to in the context of TIOT and the requirements regarding interested parties' and determine the risks and opportunities that need to be addressed to:

a) give assurance that the QMS can achieve its intended result(s);

b) enhance desirable effects;

c) prevent or reduce undesired effects, and

d) achieve improvement.

TIOT plans:

a) actions to address these risks and opportunities, and

b) how to:

   1) integrate and implement the actions into its QMS processes, and
2) evaluate the effectiveness of these actions.

Actions taken to address risks and opportunities are proportionate to the potential impact on the conformity of products and services.

4.1.5 Communication

4.1.5.1 Internal

TIOT ensures that appropriate communication processes are established within TIOT and the effectiveness and relevance of the QMS is communicated. This includes: what it will communicate, when to communicate, with whom to communicate, how to communicate, and who communicates.

TIOT has established processes to ensure that the

a) importance of meeting customer, legal and other applicable requirements is communicated at relevant functions within TIOT, and that the

b) results of analysis of data (see 6.3) are communicated at relevant levels and functions within TIOT.

4.1.5.2 External

TIOT has determined and implemented a process for communicating with external organizations, including customers, relevant to the QMS to ensure requirements are understood throughout contract execution and product realization. This includes: what it will communicate, when to communicate, with whom to communicate, how to communicate, and who communicates.

The communication process addresses:

a) execution of customer inquiries, contracts, order handling and amendments (see 5.1),

b) provision of product information, including product nonconformities identified after delivery to the customer (see 5.10.4),

c) feedback and customer complaints relating to products and services (see 6.2.1),

d) when required by contract, the provision of information required by product quality plans and subsequent changes to those plans (see 5.7.2),

e) handling or controlling customer property, and

f) establishing specific requirements for contingency actions, when relevant.

4.2 Management Responsibility

4.2.1 General

TIOT ensures the availability of resources essential to establish, implement, maintain and improve the QMS.
Resources can include human resources and specialized skills, organizational infrastructure, technology and financial resources.

TIOT provides evidence of its commitment to the development, implementation, and takes accountability of the QMS and continually improves its effectiveness by:

a) ensuring that quality objectives are established including key performance indicators for use in data analysis;

b) conducting management reviews (see 6.5);

c) ensuring that the quality policy and quality objectives are established for the QMS and are compatible with the context and strategic direction of TIOT;

d) ensuring the integration of the QMS requirements into TIOT’ s business processes;

e) promoting the use of the process approach and risk-based thinking;

f) ensuring that the resources needed for the QMS are available;

g) communicating the importance of effective quality management and of conforming to the QMS requirements;

h) ensuring that the QMS achieves its intended results;

i) engaging, directing and supporting persons to contribute to the effectiveness of the QMS;

j) promoting continual improvement, and

k) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

4.2.2 Responsibility, Authority & Accountability

Top management ensures that responsibilities, authorities and accountabilities of personnel within the scope of this Quality Manual are defined in the form of organization charts and job descriptions, documented, communicated and understood throughout TIOT.

Top management assigns the responsibility and authority for:

a) ensuring that the QMS conforms to the requirements of API Q1 and ISO 9001;

b) ensuring that the processes are delivering their intended outputs;

c) reporting on the performance of the QMS and on opportunities for improvement, in particular to top management;

d) ensuring the promotion of customer focus throughout TIOT, and
Section 4.2.2 continued

e) ensuring that the integrity of the QMS is maintained when changes to the QMS are planned and implemented.

Customer focus

Top management demonstrates leadership and commitment with respect to customer focus by ensuring that:

a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;

b) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;

c) the focus on consistently providing products and services that meet customer and applicable statutory and regulatory requirements is maintained, and

d) the focus on enhancing customer satisfaction is maintained.

4.2.3 Management Representative

Top management has appointed a Management Representative who has responsibility and authority that includes:

a) ensuring that processes needed for the QMS are established, implemented and maintained;

b) reporting to top management on the performance of the QMS and any need for improvement;

c) ensuring initiation of action(s) to minimize the likelihood of the occurrence of nonconformities (see 6.4.3), and

d) ensuring the promotion of awareness of customer requirements throughout TIOT.

4.3 Organization Capability

4.3.1 Provision of Resources

TIOT has determined and allocated the resources needed for the establishment and implementation, maintenance, and improvement of the effectiveness of the requirements of the QMS.

TIOT considers:

a) the capabilities of and constraints on existing internal resources, and

b) what needs to be obtained from external providers.

4.3.2 Human Resources
4.3.2.1 General

TIOT has a documented procedure (P-4.3.2 Competence, Awareness & Training) for defining personnel competency, identifying training requirements or other actions to achieve the necessary competency of personnel whose responsibilities fall within the scope of the QMS. This procedure includes provisions for determining and documenting the effectiveness of the training or other actions taken toward the achievement of required competency.

People

TIOT determines and provides the persons necessary for the effective implementation of its QMS and for the operation and control of its processes.

4.3.2.2 Personnel Competence

Personnel have been determined to be competent based on the appropriate education, training, skills and experience needed to meet product and customer requirements. Evidence of the determination of competence of personnel doing work under its control that affects the performance and effectiveness of the QMS is recorded and maintained (see 4.5). Where applicable, TIOT takes actions to acquire the necessary competence and evaluate the effectiveness of the actions taken.

4.3.2.3 Training and Awareness

TIOT ensures that persons doing work under TIOT’s control are:

a) provided QMS training and job training;

b) trained that customer-specified and/or customer-provided, when required, is included in the training program;

c) trained, identifying the frequency and content of training;

d) aware of the quality policy;

e) aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives and their contribution to the effectiveness of the QMS, including the benefits of improved quality performance;

f) aware of the implications of not conforming with the QMS requirements, and

g) maintain appropriate records of education, training, skills and experience (see 4.5).

Organizational knowledge

TIOT determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services.

This knowledge is maintained and made available to extent necessary.

When addressing changing needs and trends, TIOT considers its current knowledge and determines how to acquire or access the necessary additional knowledge and required updates.
4.3.3 Work Environment

TIOT determines, provides, manages, and maintains the work environment needed to achieve conformity applicable to the manufacture of the product and services. Work environment includes:

a) buildings, workspace and associated utilities;
b) process equipment and its maintenance (both hardware and software) (see 5.7.8);
c) supporting services (for example, transport, communication, information systems), and
d) conditions under which work is performed such as physical, environmental or other factors.

4.4 Documentation Requirements

4.4.1 General

The QMS documentation includes:

a) A Quality Policy and Quality Objectives
b) This Quality Manual that includes:
   1) the scope of the QMS, including justification for any exclusions to specific QMS elements (see 1.0)
   2) a description of the sequence and interaction between the processes of the QMS (see Appendix B)
   3) identification of processes that require validation (see 5.7.1.5), and
   4) reference to documented procedures that control the QMS processes.

c) documented procedures established for the QMS;
d) documents and records to ensure the effective planning, operation and control of its processes, and conformance/compliance with specified requirements;
e) when applicable the identification of legal, and other requirements which apply to the product;
f) documented information required by API Q1 and ISO 9001, and
g) documented information determined by TIOT as being necessary for the effectiveness of the QMS.

4.4.2 Procedures

All procedures referenced within this Quality Manual are established, documented, implemented and maintained for continued suitability. A single document can address the requirements of one or more procedures. A requirement for documented procedures can be satisfied by more than one document.
4.4.3 Control of Documents

TIOT maintains a documented procedure (P-4.4.3 Control of Documents) for the identification, distribution and control of documents required by its QMS, including required external documents.

When creating and updating documented information, TIOT ensures appropriate;

a) identification and description (e.g. a title, date, author, or reference number), and

b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic).

This procedure specifies responsibilities for approval and re-approval and identifies the controls needed to ensure that documents required by the QMS including revisions, translations and updates

a) are reviewed and approved for adequacy prior to issue and use;

b) identify changes and revision status;

c) remain legible and readily identifiable;

d) are available and suitable for use where the activity is being performed, and

e) adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity).

Documents of external origin are controlled to ensure that the relevant versions are used and maintained.

Obsolete documents are removed from all points of issue or use, or otherwise identified to ensure against unintended use if they are retained for any purpose.

Procedures, work instructions and forms required by the QMS are controlled.

4.4.4 Use of External Documents in Product Realization

When API product or other external specification requirements, including addenda, errata and updates, are used in the design or manufacture of the product, TIOT maintains a documented procedure (P-4.4.4 Use of External Documents in Product Realization) for the integration of these requirements into the product realization process and any other affected processes.

Documented information of external origin, determined by TIOT to be necessary for the planning and operation of the QMS, is identified as appropriate and controlled.

4.5 Control of Records

TIOT maintains a documented procedure (P-4.5 Control of Records) to identify the controls and responsibilities needed for the identification, collection, storage, protection, retrieval, and retention time and disposition of records.

For the control of documented information, TIOT addresses the following activities, as applicable:

a) distribution, access, retrieval and use;
b) storage and preservation, including preservation of legibility;

c) control of changes (e.g. version control), and

d) retention and disposition.

Records, including those originating from outsourced activities (see 5.6.1.6), are established and controlled to provide evidence of conformity to requirements and operation of Tiot’s QMS.

Records remain legible, identifiable, and retrievable. Records are retained for a minimum of five years or as required by customer, legal, product specifications and other applicable requirements, whichever is longer.

Documented information retained as evidence of conformity is protected from unintended alterations.

5 PRODUCT REALIZATION

5.1 Contract Review

5.1.1 General

Tiot maintains a documented procedure (P-5.1 Contract Review) for the review of requirements related to the provision of products and required servicing.

5.1.2 Determination of Requirements

Tiot determines

a) requirements specified by the customer;

b) legal and other applicable requirements (statutory and regulatory requirements);

c) requirements not stated by the customer but considered necessary by Tiot for the provision of the product, and

d) Tiot can meet the claims for the products and services it offers and provides information relating to products and services.

Tiot meets requirements for post-delivery activities associated with the products and services.

In determining the extent of post-delivery activities that are required, Tiot considers:

a) the potential undesired consequences associated with its products and services;

b) the nature, use and intended lifetime of its products and services, and

c) customer feedback.
Where the customer provides no documented statement of the requirements, the customer requirements are confirmed by TIOT’s and records maintained (see 4.5).

5.1.3 Review of Requirements

TIOT reviews the requirements related to provision of products and services. This review is conducted prior to TIOT’s commitment to deliver product and services to the customer and includes and ensures requirements:

a) are identified and documented;

b) specified by the customer, including the requirements for delivery and post-delivery activities;

c) not stated by the customer, but necessary for the customers’ specified or intended use, when known;

d) specified by TIOT;

e) applicable to the products and services (statutory and regulatory);

f) differing from those previously identified are resolved, and

g) can be met by TIOT.

Where contract requirements are changed, TIOT ensures that relevant documents are amended and that relevant personnel are made aware of the changed requirements for products and services.

Records of the results of the review, including resulting actions, are maintained (see 4.5) as applicable, on:

a) the results of the review, and

b) any new requirements for the products and services.

5.2 Planning

TIOT identifies and plans the processes and documents needed for product realization. Planning of product realization is consistent with the requirements of the other processes of the QMS (see 4.1.4). In planning, TIOT addresses the following

a) required resources and work environment management (see 4.3)

b) product and services and customer-specified requirements (see 5.1)

c) legal and other applicable requirements

d) contingencies based on risk assessment (see 5.3 and 5.5)

e) design and development requirements (see 5.4)
f) required verification, validation, monitoring, measurement, inspection and test activities specific to the product and the criteria for product acceptance

g) management of change (see 5.11), and

h) records needed to provide evidence that the product realization processes meet requirements (see 4.5).

The output of planning is documented and updated as changes occur. The plans are maintained in a structure suitable for TIOT's method of operations. TIOT controls planned changes and reviews the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

5.3 Risk Assessment and Management

TIOT maintains a documented procedure (P-5.3 Risk Assessment and Management) to identify and control risk and opportunity associated with impact on delivery and quality of product or service. The procedure identifies the techniques, tools and their application for risk identification, assessment and mitigation.

Risk assessment can include consideration of severity, detection methods and probability of occurrence.

Risk assessment associated with product or service delivery includes:

a) facility/equipment availability and maintenance, and

b) supplier/external provider performance and material availability/supply

Risk assessment associated with product or service quality includes, as applicable

a) delivery of nonconforming product or service (see 5.10.1), and

b) availability of competent personnel

Opportunities include (see 6.4.3):

a) enhance desirable effects, and

b) achieve improvement.

Actions taken to address risks and opportunities are proportionate to the potential impact on the conformity of products and services.

Records of risk assessment and opportunity including actions taken are maintained (see 4.5).

The output of risk assessment may be used in the development of contingency plans (see 5.5).

Risk assessment can be an activity associated with corrective and/or preventive action.
5.4 Design and Development

5.4.1 Design and Development Planning

TIOT maintains documented procedure (P-5.4 Design and Development) to plan and control the design and development of the product.

This procedure identifies and considers the:

a) plan(s), including plan updates, used for design development;
b) design and development stages, including applicable design and development reviews;
c) internal and external resources, responsibilities, authorities and their interfaces to ensure effective communication;
d) nature, duration and complexity of the design and development activities;
e) need to control interfaces between persons involved in the design and development process;
f) need for involvement of customer and users in the design and development process;
g) requirements for subsequent provision of product and services;
h) level of control expected for the design and development process by customers and other relevant interested parties;
i) review, verification and validation activities necessary to complete each design and development stage;
j) requirements for a final review of the design (see 5.4.5), and
k) documented information needed to demonstrate that design and development requirements have been met.

When design and development activities are performed at different locations within the same organization, the procedure identifies the controls required to ensure that the designs meet the requirements of 5.4.

In the event that TIOT outsources any aspect of the design and development process it ensures that the supplier meets the requirements of 5.6.1.6.

5.4.2 Design and Development Inputs

Inputs are identified and reviewed for adequacy, completeness and lack of conflict. TIOT determines requirements essential for the specific type of products and services being designed and developed.

Inputs include functional and technical requirements, and the following, as applicable:

a) customer-specified requirements (see 5.1);
b) requirements provided from external sources, including API product specifications;
c) environmental and operational conditions;
d) functional and performance requirements;
e) methodology, assumptions and formulae documentation;
f) standards or codes of practice that TIOT has committed to implement;
g) historical performance and other information derived from previous similar designs and development activities;
h) legal, statutory and regulatory requirements;
i) results from risk assessments (see 5.3), and
j) potential consequences of failure due to the nature of the products and services.

Inputs are adequate for design and development purposes, complete, and unambiguous. Conflicting design and development inputs are resolved. Records of design inputs are maintained (see 4.5).

5.4.3 Design and Development Outputs

Outputs are documented to allow verification against the design and development input requirements.

Outputs
a) meet the input requirements for design and development;
b) are adequate for the subsequent processes for the provision of products and services;
c) provide appropriate information for purchasing, production and servicing;
d) identify or reference design acceptance criteria (DAC);
e) include identification of, or reference to, products and/or components deemed critical to the design;
f) include results of applicable calculations;
g) ensure products to be produced or services to be provided are fit for intended purpose, and
h) specify the characteristics of the product and services that are essential for its safe and proper use.

Records of design outputs are maintained (see 4.5).

Identification of criticality of products and/or components can be maintained outside of the design and development process.

5.4.4 Design and Development Review

At suitable stages, review(s) are performed to:

   a) evaluate the suitability, adequacy and effectiveness of the results are defined and design and development stages meet specified requirements, and
b) identify any problems and propose necessary actions. Participants in such review(s) include representatives of functions concerned with the design and development stage(s) being reviewed.

Records of the results of the review(s) and any necessary actions are maintained (see 4.5).

5.4.5 Design and Development Verification and Final Review

To ensure that the design and development outputs have met the design and development input requirements, design and development verification and a final design review and design verification are conducted and documented in accordance with planned arrangements (see 5.4.1).

Records of design verification and the final design review and design verification are maintained (see 4.5).

5.4.6 Design and Development Validation and Approval

Design validation is performed in accordance with planned arrangements (see 5.4.1) to ensure that the resulting product and services are capable of meeting the specified requirements for the specified application or intended use. When possible, validation is completed prior to the delivery of the product or service.

After validation the completed design is approved by competent (see 4.3.2.2) individual(s) other than the person or persons who developed the design.

Records of the design validation, approval and any necessary actions are maintained (see 4.5).

5.4.7 Design and Development Changes

Design and development changes identify, review and control changes made during, or subsequent to, the design and development of products and services, verify and validate, as appropriate, and approved before implementation to the extent necessary to ensure that there is no adverse impact on conformity to requirements.

The review of design and development changes includes an evaluation of the effect of the changes on product or service and/or their constituent parts already delivered.

Design and development changes, including changes to design documents, require the same controls as the original design and development and those relevant persons are made aware of the changed requirements, when the requirements for products and services are changed.

Records of design and development changes, reviews of those authorized changes and any necessary actions taken to prevent adverse impacts are maintained (see 4.5).

5.5 Contingency Planning
5.5.1 General
TIOT maintains a documented procedure (**P-5.5 Contingency Planning**) for contingency planning needed to address risk associated with impact on delivery and quality of product or service.

Contingency planning is based on assessed risks (see 5.3) and output is documented and communicated to the relevant personnel and updated as required.

5.5.2 Planning Output
Contingency plans include:

- a) actions required in response to significant risk scenarios to mitigate effects of disruptive incidents;
- b) identification and assignment of responsibilities and authorities, and
- c) internal and external communication controls (see 4.1.5).

5.6 Purchasing

5.6.1 Purchasing Control

5.6.1.1 Procedure
TIOT maintains documented procedure (**P-5.6 Purchasing Control**) to ensure that purchased products, processes or outsourced activities conform to specified requirements.

This procedure addresses:

- a) determination of the criticality of the activities or products as they are applicable to conformance to product or customer specifications;
- b) initial evaluation and selection of suppliers/external providers based on their ability to supply/provide products/services or activities in accordance with TIOT's requirements (see 5.6.1.2 and 5.6.1.3);
- c) type and extent of control applied to the supplier/external providers based on the criticality of the product/service or activity;
- d) determine and apply criteria, scope, frequency, monitoring of performance and methods for re-assessment of suppliers/external providers based on their ability to provide processes or products and services in accordance with requirements;
- e) maintaining a list of approved suppliers/external providers and scope of approval, and
- f) type and extent of control to be applied to outsourced activities (see 5.6.1.6).

TIOT determines the controls to be applied to supplier/externally provided processes, products and services when:

- a) products and services from suppliers/external providers are intended for incorporation into TIOT’s own product and services;
b) products and services are provided directly to the customer(s) by suppliers/external providers on behalf of TIOT, and

c) a process or part of a process is provided by a supplier/external provider as a result of a decision by TIOT.

TIOT retains documented information of these activities and any necessary actions arising from the evaluations.

5.6.1.2 Initial Supplier/External Provider Evaluation – Critical Purchases

For purchase of critical products, components or activities that impact product realization or the final product, the criteria for the initial evaluation of suppliers/external providers is site-specific for each supplier/external provider and include the following:

a) verification that the supplier/external provider’s QMS conforms to TIOT’s specified quality system requirements, and

b) assessment of the supplier/external provider to ensure its capability to meet TIOT’s purchasing requirements by:
   1) performing an on-site evaluation of relevant activities, or
   2) performing first article inspection to ensure conformance to stated requirements, or
   3) identifying how the supplied/externally provided product or service conforms to stated requirements when limited by proprietary, legal and/or contractual arrangements.

TIOT ensures that supplier/externally provided processes, products and services do not adversely affect TIOT’s ability to consistently deliver conforming products and services to its customers.

TIOT:

a) ensures that supplier/externally provided processes remain within the control of its QMS;

b) defines both the controls that it intends to apply to a supplier/external provider and those it intends to apply to the resulting output;

   1) Taking into consideration: the potential impact of the supplier/externally provided processes, products and services on TIOT’s ability to consistently meet customer and applicable statutory and regulatory requirements, and

   2) The effectiveness of the controls applied by the supplier/external provider.

5.6.1.3 Initial Supplier /External Provider Evaluation – Noncritical Purchases

For purchase of noncritical products, components or activities that impact product realization or the final product or service, the criteria for evaluation of suppliers /external providers meet the requirements of 5.6.1.2 or satisfy one or more of the following:
Section 5.6.1.3 continued

a) verification that the supplier /external provider’s QMS conforms to TIOT’s specified quality system requirements, or

b) assessment of the supplier /external provider to meet TIOT’s purchasing requirements, or

c) assessment of the product or service upon delivery or activity upon completion.

TIOT ensures that supplier/externally provided processes, products and services do not adversely affect TIOT’s ability to consistently deliver conforming products and services to its customers.

TIOT:

a) Ensures that supplier/externally provided processes remain within the control of its QMS;

b) Defines both the controls that it intends to apply to a supplier/external provider and those it intends to apply to the resulting output;

   1) taking into consideration: the potential impact of the supplier/externally provided processes, products and services on TIOT’s ability to consistently meet customer and applicable statutory and regulatory requirements, and

   2) the effectiveness of the controls applied by the supplier/external provider.

5.6.1.4 Supplier /External Provider Re-evaluation

For re-evaluation of all suppliers /external providers (critical and noncritical), the requirements of 5.6.1.3 apply.

5.6.1.5 Supplier /External Provider Evaluation – Records

Records of the results of all evaluations and any necessary actions arising from the evaluations are maintained (see 4.5).

5.6.1.6 Outsourcing

When TIOT chooses to outsource any activity within the scope of its QMS, it ensures that all applicable elements of its QMS are satisfied and maintains responsibility for product conformance to specified requirements, including applicable API product specifications, associated with product realization.

Records of outsourced activities are maintained (see 4.5).

5.6.2 Purchasing Information

TIOT ensures the adequacy of specified purchasing information prior to their communication to the supplier/external provider. Purchasing information provided to the supplier/external provider is documented and adequately describes the process, product or activity to be purchased, including acceptance criteria, and where appropriate:
Section 5.6.2 continued

a) requirements for approval of supplier/external provider’s procedures, processes and equipment, products, services and the release of products and services;
b) applicable version of specifications, drawings, process requirements, inspection instructions, traceability and other relevant technical data;
c) requirements (competence) for qualification of supplier/external provider’s personnel;
d) QMS requirements;
e) the supplier’s/external provider’s interactions with TIOT;
f) control and monitoring of the supplier/external provider’s performance to be applied by TIOT, and
g) verification or validation activities that TIOT, or its customer, intends to perform at the suppliers/external providers premises.

5.6.3 Verification of Purchased Products or Activities

TIOT maintains a documented procedure (P-5.6 Purchasing Section 5.4 Verification of Purchased Product) for the verification or other activities necessary for ensuring that purchased products or activities meet specified purchase requirements.

When TIOT or its customer intends to perform verification at the supplier/external provider’s premises, it states the intended verification arrangements and method of product release in the purchasing information.

TIOT determines and provides evidence the verification, or other activities, necessary to ensure that the supplier/externally provided processes, products and services meet requirements.

TIOT ensures and provides evidence that purchased products and activities conform to specified requirements.

Records of verification activities are maintained (see 4.5).

5.7 Production and Servicing Provision

5.7.1 Control of Production and Servicing

5.7.1.1 Production

TIOT maintains a documented procedure (P-5.7.1.1 Production) that describes controls associated with the production of products. The procedure addresses the following:
a) availability of information that describes the characteristics of the product to be produced, the services to be provided, or the activities to be performed;
b) results to be achieved;
c) implementation of the product quality plan, when applicable (see 5.7.2);
Section 5.7.1.1 continued

d) ensuring design requirements and related changes are satisfied, when applicable (see 5.4);
e) availability and use of suitable production, testing, monitoring and measurement equipment at appropriate stages to verify that criteria for control of processes and process or outputs, and acceptance criteria for products and services, have been met;
f) availability of work instructions when applicable;
g) process control documents (see 5.7.1.3);
h) implementation of monitoring and measurement activities;
i) appointment of competent persons, including any required qualification;
j) use of suitable infrastructure and environment for the operation of processes;
k) validation, and periodic revalidation, of the ability to achieve planned results of the process for production and service provision, where the resulting output cannot be verified by subsequent monitoring and measurement;
l) implementation of actions to prevent human error, and
m) implementation of product release (see 5.9), including applicable delivery and post-delivery activities

5.7.1.2 Servicing

TIOT maintains a documented procedure (P-5.7.1.2 Servicing) that describes the controls associated with the servicing (see 3.1.20) of products. This procedure addresses the following:
a) review and implementation of TIOT, customer-specific, product servicing and other servicing requirements
b) the availability and use of suitable servicing, testing, monitoring and measurement equipment
c) the availability of procedures when applicable
d) maintenance of identification and traceability requirements throughout the servicing process
e) the implementation of monitoring and measurement activities,
f) process control documents (see 5.7.1.3), and
g) requirements for release of the product that was serviced (see 5.9).

Post-delivery activities

TIOT meets requirements for post-delivery activities associated with the products and services.
In determining the extent of post-delivery activities that are required, TIOT considers the:

a) statutory and regulatory requirements;

b) potential undesired consequences associated with its products and services;

c) nature, use and intended lifetime of the products and services;

d) customer requirements, and

e) customer feedback.

5.7.1.3 Process Control Documents

Process controls are documented on routers, travelers, checklists, process sheets or equivalent controls required by TIOT and include requirements for verifying conformance with applicable product quality plans (see 5.7.2). These controls include requirements for API product specifications, customer requirements and/or other product standards/codes when applicable.

The process control documents include or reference instructions and acceptance criteria for processes, tests, inspections, and when applicable, customer’s inspection, hold or witness points.

5.7.1.4 Product Realization Capability Documentation

TIOT develops and maintains documentation that includes but is not limited to product realization plans (see 5.2) and records of review/verification, validation, monitoring, measurement, inspection and test activities, including criteria for product acceptance that demonstrate its capability to satisfy specified product and/or servicing requirements.

Product realization documentation is evidence of the capability of the organization to manufacture products or families of products and does not extend to every work order or individual product manufactured.

TIOT has reviewed and controlled changes for production or service provision, to the extent necessary, to ensure continuing conformity with requirements.

TIOT retains documented information describing the results of the review of changes, the person(s) authorizing the change, and any necessary actions arising from the review.

5.7.1.5 Validation of Processes for Production and Servicing

TIOT validates processes for production and servicing where the resulting output cannot be verified by subsequent monitoring or measurement and as a consequence, deficiencies become apparent only after the product is in use or the servicing has been delivered. Validation demonstrates the ability of these processes to achieve planned results.

Where it chooses to outsource a process that requires validation, TIOT requires that the supplier/external provider conform to these requirements (see 5.6.1.6).
TIOT maintains a documented procedure (P-5.7.1.5 Validation of Special Processes) to address methods for review and approval of special processes including:

a) required equipment

b) qualification of personnel

c) use of specific methods, including identified operating parameters

d) identification of acceptance criteria

e) requirements for records/documentated information (see 4.5), and

f) revalidation.

For TIOT, the processes requiring validation are NDE, Welding and Heat Treat.

5.7.2 Product Quality Plans

When required by contract, TIOT develops a product quality plan that specifies the processes of the QMS (including the product realization processes) and the resources to be applied to a product.

When required by contract the product quality plan addresses each of the following:

a) description of the product to be manufactured,

b) required processes and documentation, including required inspections, tests and records, for conformance with requirements,

c) identification and reference to control of outsourced activities,

d) identification of each procedure, specification or other document referenced or used in each activity, and

e) identification of the required hold, witness, monitor and document review points.

Product quality plans and any revisions to them are documented and approved by TIOT to ensure customer requirements are met. Product quality plans and any revisions are communicated to the customer.

5.7.3 Identification and Traceability

TIOT maintains a documented procedure (P-5.7.3 Identification and Traceability) for unique identification and traceability while the product and service is under its control throughout the product realization process, including applicable delivery and post-delivery activities with respect to monitoring and measurement requirements. TIOT uses suitable means to identify outputs when it is necessary to ensure the conformity of products and services. This procedure includes requirements for maintenance or replacement of identification and/or traceability marks.

Records of identification and traceability are maintained (See 4.5).
5.7.4 Product Inspection / Test Status
TIOT maintains a documented procedure (P-5.7.7 Inspection and Testing) for the identification of product inspection and/or test status throughout the product realization process which indicates the conformity or nonconformity of product with respect to inspections and/or tests performed. It ensures that only product that meets requirements or is authorized under concession (see 5.10.3) is released.

5.7.5 Customer-or External Provider-Supplied Property
TIOT maintains a documented procedure (P-5.7.5 Customer/External Provider-Supplied Property) for the identification, verification, protection, safeguarding, preservation, maintenance and control of customer-or external provider-supplied property, including intellectual property and data, while under control of TIOT for use or incorporation into the products and services. This procedure includes requirements for reporting to the customer or external provider any loss, damage or unsuitability for use of customer-or external provider-supplied property.

Records for the control and disposition of customer-or external provider-supplied property are maintained (see 4.5).

5.7.6 Preservation of Product
5.7.6.1 General
TIOT maintains a documented procedure (P-5.7.6 Preservation of Product) describing the methods used to preserve the product and/or service provision and constituent parts throughout product realization and delivery to the intended destination in order to maintain conformity to requirements. As applicable, preservation includes identification and traceability marks, transportation, handling, packaging and protection.

5.7.6.2 Storage and Assessment
This procedure identifies the requirements for storage and assessment. Designated storage areas or stock rooms are used to prevent damage or deterioration of product, pending use or delivery.

In order to detect deterioration, the condition of product or constituent parts in stock is assessed at specified intervals identified by the procedure. The interval is appropriate to the products or constituent parts being assessed.

Records of the results of assessments are maintained (see 4.5).

5.7.7 Inspection and Testing
5.7.7.1 General
TIOT maintains a documented procedure (P-5.7.7 Inspection and Testing) for inspection and testing to verify that product requirements have been met. This procedure includes requirements for in-process, and final inspection and testing.

Records of required inspection and testing are maintained (see 4.5).
5.7.7.2 In-process Inspection and Testing

TIOT inspects and tests the product at planned stages as required by the product quality plan (see 5.7.2), process control documents (see 5.7.1.3) and/or documented procedures. Evidence of conformity with the acceptance criteria is maintained.

5.7.7.3 Final Inspection and Testing

TIOT conducts final inspection and testing in accordance with the product quality plan and/or other production control documents to validate and document conformity of the finished product to the specified requirements.

Personnel other than those who performed or directly supervised the production of the product perform final acceptance inspection at planned stages of the product realization process.

5.7.8 Preventive Maintenance

TIOT maintains a documented procedure (P-5.7.8 Preventive Maintenance) for the establishment of preventive maintenance for equipment used in product realization. This procedure identifies requirements for:

a) type of equipment to be maintained,

b) frequency, and

c) responsible personnel.

Records of preventive maintenance are maintained (see 4.5).

Preventive maintenance can be based on risk, system reliability, usage history, experience, industry recommended practices, relevant codes and standards, original equipment manufacturer’s guidelines, or other applicable requirements.

5.8 Control of Testing, Measuring and Monitoring Equipment

TIOT determines the testing, monitoring and measurement requirements and the associated equipment needed to provide evidence of conformity to those requirements, and maintains a documented procedure (P-5.8 Control of Testing, Measuring and Monitoring Equipment) in order to ensure that testing, measurement and monitoring equipment is calibrated to ensure their continued fitness for their purpose and maintained and that the equipment is used in a manner that is consistent with monitoring and measurement requirements.

This procedure includes requirements for the specific equipment type that addresses:

a) unique identifier;

b) calibration status;

c) traceability of calibration standards used to international or national measurement standards;

d) frequency of calibration, at specific intervals or prior to use
Section 5.8 continued

e) calibration or verification method, including adjustments and readjustments as necessary, and
f) acceptance criteria.
g) the control of equipment identified as out-of-calibration in order to prevent unintended use;
h) when the equipment if found to be out of calibration, and assessment of the validity of previous measurements and actions to be taken on the equipment and product, including maintaining records and evidence of notification to the customer (see 4.1.5.2) if suspect product has been shipped.

Testing, measuring, monitoring equipment is

1) calibrated or verified, or both, at specified intervals or prior to use against measurement standards traceable to international or national measurement standards, when no such standards exists, the basis used for calibration or verification are retained as documented information; (Verification against identified acceptance criteria is performed on non-adjustable equipment.)

2) identifiable by the user as to its calibration status for the activities being performed at all times;

3) safeguarded from adjustments that would invalidate the measurement result or the calibration status;

4) protected from damage and deterioration during handling, maintenance and storage, and

5) used under environmental conditions that are suitable for the calibrations, inspections, measurements and tests being carried out.

When used in the testing, monitoring or measurement of specified requirements, the ability of computer software to satisfy the intended application is confirmed prior to initial use and reconfirmed as necessary.

When equipment is provided from an external source, including third party, proprietary, employee and customer-owned equipment, TIOT verifies that the equipment is suitable and provides evidence of conformity to the requirements of this section 5.8.

TIOT maintains a list of the required testing, measurement and monitoring equipment used to determine product conformity to requirements that includes a unique identifier specific to each piece of equipment.

TIOT retains the results of calibration and verification information as evidence of fitness for purpose of monitoring and measurement resources (see 4.5).

5.9 Product Release

TIOT ensures that release of product and service to the customer does not proceed until the planned arrangements (see 5.7) have been satisfactorily completed, unless otherwise
approved by a relevant authority and, where applicable, by the customer as identified in documented procedure (DP-5.7.7 Inspection & Testing).

Records are maintained to enable evidence of conformity with acceptance criteria and identification of the individual releasing the product (see 4.5).

5.10 Control of Nonconforming Product

5.10.1 General

TIOT maintains a documented procedure (P-5.10 Control of Nonconforming Product) to identify the controls and related responsibilities and authorities for addressing nonconforming product.

The procedures for addressing nonconforming product identified during product realization include controls for:

a) product identification to prevent unintended use or delivery;
b) addressing the detected nonconformity (see 5.10.2);
c) taking action to preclude its original intended use or delivery, and
d) authorizing its use, release or acceptance under concession by relevant authority and, where applicable, by the customer.

The procedures for addressing nonconforming product identified after delivery include controls for:

a) identifying, documenting and reporting nonconformances or product failure identified after delivery;
b) ensuring the analysis of product nonconformance or failure, provided the product or documented evidence supporting the nonconformity is available to facilitate the determination of the cause (see 6.4.2), and
c) taking action appropriate to the effects, or potential effects, of the nonconformance when nonconforming product is detected after delivery or during or after the provision of service.

5.10.2 Nonconforming Product

TIOT addresses nonconforming product by performing one or more of the following:
a) repair or rework with subsequent inspection to meet specified requirements;
b) re-grade for alternative applications;
c) segregation, containment, return or suspension of provision of products and services;
d) release under concession (see 5.10.3), and/or
e) reject or scrap.
5.10.3 Release of Nonconforming Product under Concession

The evaluation and release under concession of nonconforming product that does not satisfy manufacturing acceptance criteria (MAC) is permitted when TIOT Engineering and the customer (where applicable) have authorized the release provided that:

a) products continue to satisfy the applicable design acceptance criteria (DAC) and/or customer criteria; or

b) the violated MAC are categorized as unnecessary to satisfy the applicable DAC and/or customer criteria; or

c) the DAC are changed and the products satisfy the revised DAC and associated MAC requirements.

Conformity to the requirements are verified when nonconforming outputs are corrected.

Concession against API product specification requirements is not allowed for Monogram product.

5.10.4 Customer Notification

TIOT notifies customers of product not conforming to DAC or contract requirements that has been delivered. It also notifies API in the event that the nonconforming product was monogrammed and does not conform to product spec requirements.

Records of any such notifications are maintained (see 4.5).

5.10.5 Records

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, are maintained (see 4.5).

5.11 Management of Change (MOC)

5.11.1 General

TIOT maintains a process (see P-5.11 Management of Change) for management of change (MOC). It ensures that the integrity of the QMS is maintained when changes to the QMS are planned and implemented.

It identifies the potential risks (see 5.3) associated with the change and any required approvals prior to the introduction of such changes.

Records of MOC activities are maintained (see 4.5).

5.11.2 MOC Implementation

TIOT uses the MOC process for any of the following that may negatively impact the quality of the product:

a) changes in TIOT structure (see 4.3.2);

b) changes in key or essential personnel (allocation or reallocation of responsibilities and authorities) (see 4.3.2);
c) changes in critical suppliers/external providers (see 5.6.1);

d) changes to the management system procedures, including changes resulting from corrective and preventive actions (see 6.4), and

e) the availability of resources.

5.11.3 MOC Notification

TIOT notifies relevant personnel, including the customer when required by contract, of the change and residual or new risk due to changes that have either been initiated by it or requested by the customer.

6 QUALITY MANAGEMENT SYSTEM MONITORING, MEASUREMENT, ANALYSIS AND IMPROVEMENT

6.1 General

TIOT plans and implements, analyzes and evaluates the monitoring, measurement, analysis and improvement processes needed to ensure conformity, performance and effectiveness of the QMS to the requirements of API Q1, ISO 9001, this Quality Manual and to continually improve the effectiveness of the QMS.

QMS monitoring, measurement, analysis and improvement include determination of applicable methods, including techniques for the analysis of data, and the extent of their use.

6.2 Monitoring, Measuring and Improving

6.2.1 Customer Satisfaction

TIOT maintains a documented procedure (P-6.2.1 Customer Satisfaction) to measure customer satisfaction. This procedure addresses the frequency of measurement, method of obtaining customer feedback, key performance indicators (KPIs), and other information that it uses to determine and monitor whether TIOT has satisfied the customer’s perception of the degree to which their needs and expectations have been fulfilled in meeting identified requirements.

Records of the results of customer satisfaction information are maintained (see 4.5).

6.2.2 Internal Audit

6.2.2.1 General

TIOT maintains a documented procedure (P-6.2.2 Internal Audit) to define responsibilities for establishing, planning, conducting and documenting internal audits. These audits verify that the QMS is effectively implemented and maintained and conforms to the requirements of this Quality Manual, API Specification 8C and supporting QMS documentation. The planning of internal audits takes into consideration the results of previous audits, the importance of the processes concerned, any changes affecting TIOT, and criticality of the process being audited.
TIOT identifies the audit criteria, scope, frequency, responsibilities, planning requirements, reporting and methods to ensure that all processes of the QMS are audited at least every twelve months.

Outsourced activities that impact the quality of the product and that are performed at the organization's facility are included as a part of the international audit of the organization.

6.2.2.2 Performance of Internal Audit

Audits are performed by competent personnel (see 4.3.2.2) independent of those who performed or directly supervised the activity being audited to ensure objectivity and impartiality of the audit process. Records of the audits provide objective evidence that the QMS is implemented and maintained (see 4.5).

Product specification requirements may be embedded throughout the QMS processes and audited in conjunction with one or more QMS processes.

All processes of the QMS required to meet API Q1, ISO 9001, and API Specification 8C are audited prior to claiming conformance to the requirements of these specifications.

6.2.2.3 Audit Review and Closure

TIOT identifies response times for addressing detected nonconformities and takes necessary corrections and corrective actions without undue delay in accordance with the corrective action documented procedure. The relevant management responsible for the area being audited ensures that any necessary corrections and corrective actions follow the requirements of 6.4.2. The results of internal audits and status of corrective actions are reported in the management review (see 6.5). Records of internal audits are maintained (see 4.5).

6.2.3 Process Evaluation

TIOT uses the internal audit and management review processes to evaluate the ability of the QMS processes to achieve planned results, including conformity to product requirements. When planned results are not achieved, corrective action is taken (see 6.4.2), as appropriate.

TIOT determines:

a) what needs to be monitored and measured;

b) the methods for monitoring, measurement, analysis and evaluation needed to ensure valid results;

c) when the monitoring and measuring are performed, and

d) when the results from monitoring and measurement are analyzed and evaluated.

TIOT evaluates the performance and the effectiveness of the QMS.

TIOT retains appropriate documented information as evidence of the results.
6.3  Analysis of Data
TIOT maintains a documented procedure (P-6.3 Analysis of Data) for the identification, collection and analysis of data to demonstrate the suitability and effectiveness of the QMS. The analysis includes data generated from monitoring and measurement, internal audits (see 6.2.2), management reviews (see 6.5) and other relevant sources.

The data analysis output provides information relating to
a) customer satisfaction (degree) (see 6.2.1);
b) conformity to product and service requirements;
c) nonconformities and product failures identified after delivery or use, provided the product or documented evidence is available to facilitate the determination of the cause (see 5.10);
d) characteristics and trends of processes and products including opportunities for preventive action (see 6.4.3);
e) supplier/external provider performance (see 5.6);
f) quality objectives (see 4.1.3), and
g) the effectiveness of actions taken to address risks and opportunities.

TIOT uses data to evaluate where continual improvement of the effectiveness of the QMS can be made.

6.4  Improvement
6.4.1  General
TIOT continually improves and implements the suitability, adequacy, and the effectiveness of the QMS through the use of the quality policy, quality objectives, audit results, customer requirements, customer satisfaction, analysis and evaluation of data, corrective and preventive actions and management review.

This includes:
a) improving products and services to meet requirements as well as to address future needs and expectations;
b) correcting, preventing and reducing undesired effects, and
c) improving the performance and effectiveness of the QMS.

6.4.2  Corrective Action
TIOT maintains a documented procedure (P-6.4.2 Corrective Action) to correct nonconformities and to take corrective actions, both internally and within the supply chain, to eliminate the causes of nonconformities in order to minimize the likelihood of its recurrence. Corrective actions are appropriate to the effect(s) of the nonconformity encountered.

Corrective action can apply to both QMS processes and nonconforming product trends.

This procedure identifies requirements for:
a) reviewing a process nonconformity (including customer complaints);
b) determining and implement corrections (deal with the consequences);
c) identifying the root cause of the nonconformity and evaluating the need for corrective actions;
d) implementing corrective action to reduce the likelihood that a nonconformity recurs;
e) identifying the timeframe and responsible person(s) for addressing immediate correction, root cause analysis and corrective action plan;
f) verification of the effectiveness of the corrections and corrective action taken;
g) MOC (see 5.11) when the corrective actions require new or changed controls within the QMS, and
h) update risks and opportunities determined during planning, if necessary.

Records of the activities for control of a nonconforming process are maintained (see 4.5). Records identify the objective evidence used to reach a conclusion of effectiveness of the corrective actions taken.

6.4.3 Preventive Action

TIOT maintains a documented procedure (P-6.4.3 Preventive Action) to determine and implement preventive actions, both internally and within the supply chain, to eliminate the causes of potential nonconformities in order to minimize the likelihood of their occurrence. Preventive actions are appropriate to the effect(s) of the potential problems.

Preventive action can apply to both QMS processes and product analysis.

This procedure identifies requirements for:

a) Identifying opportunities for improvements;
b) identifying a potential nonconformity and its potential cause(s);
c) evaluating the need for preventive action, including any immediate or short term action required, to prevent occurrence of a nonconformity;
d) identifying the timeframe and responsible person(s) for addressing the immediate containment, root cause analysis and preventive action plan;
e) reviewing the effectiveness of the preventive action taken, and
f) MOC (see 5.11) when the preventive action requires new or changed controls within the QMS.

Records of the activities for control of potential process nonconformities are maintained (see 4.5).

6.5 Management Review
6.5.1 General
TIOT’s QMS is reviewed at least every twelve months by its management to evaluate the QMS’s continuing suitability, adequacy and effectiveness and alignment with the strategic direction of TIOT. This review includes assessing opportunities for improvement and the need for changes to the QMS, including the quality policy and quality objectives.

6.5.2 Input Requirements
The input to management review includes, as a minimum, information on the performance and effectiveness of the QMS including trends in:

a) status and effectiveness of actions resulting from previous management reviews;
b) results of audits (see 6.2.2);
c) changes in external and internal issues that are relevant that could affect the QMS, including changes to legal and other applicable requirements (such as industry standards);
d) analysis of customer satisfaction, including customer feedback and feedback from relevant interested parties (see 6.2.1);
e) process performance and conformity (monitoring and measurement results) of products and services;
f) results of risk assessment and the effectiveness of actions taken to address risks and opportunities (see 5.3);
g) status, nonconformities and corrective and preventive actions (see 6.4.2 and 6.4.3);
h) the performance and analysis of supplier/external providers performance (see 5.6);
i) review of the analysis of product conformity, including nonconformities identified after delivery or use (see 5.10);
j) recommendations and opportunities for improvement;
k) the extent to which quality objectives have been met, and
l) the adequacy of resources.

6.5.3 Output Requirements
The output from the management review includes a summary assessment of the effectiveness of the QMS. The assessment also includes any required changes to the processes and any decisions and actions related to: opportunities for improvement to products and services in meeting customer requirements, any need for changes to the QMS, and required resources.

Top management reviews and approves the output of management reviews. Management reviews are documented and records of these reviews are maintained (see 4.5).
7 API Marking Procedure

TIOT maintains a documented API marking procedure (P-7.0 API Monogram Process) which incorporates the marking requirements of API Specification Q1 Annex A, section A.5 and the applicable specification 8C requirements.

QUALITY MANUAL REVISION HISTORY

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Appendix A

Quality Policy

“It is the policy of Texas International Oilfield Tools to meet and/or exceed customer requirements by on-time delivery of the highest quality of oilfield equipment, in strict compliance with safety and regulatory requirements, while providing maximum value and superior customer service during and after the sale of products, and to continually improve the effectiveness of our quality management system.”

Approved by:  
Rex Shepperd  
President

Date:  05/07/18
Appendix C

Organization Chart