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Ballot # 6641

Qualification of Suppliers of Machining Services for Use in the Petroleum and Natural Gas Industries

API STANDARD 20M

SECOND EDITION, XXXXXXXX 202X

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1 Scope

1.1 Purpose

This standard specifies requirements for the qualification of suppliers of machining services where API product standards require such services or are otherwise specified as a requirement for conformance. Conformance with this standard is not required to demonstrate conformance with any other API standard or specification.

1.2 Applicability

The requirements of this standard apply to machining operations performed in a machine shop or in the field.

NOTE This standard does not limit the responsibility of any manufacturer of commercial products using machined parts and manufactured to an API standard from its responsibility for conformance with all applicable requirements of that API standard.

1.3 Machining Qualification Levels

This API standard establishes the requirements for three machining qualification levels (MQL 1, MQL 2, and MQL 3). These three MQL designations define different levels of quality and qualification requirements. These MQLs are numbered in increasing levels of requirements in order to reflect increasing quality and qualification criteria.

Final assembly, component testing (e.g. nondestructive examination, pressure testing) or a broker of machining services are outside the scope of this standard.

This standard applies when specified by the customer or voluntarily followed by the machining services supplier.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Specification Q1, *Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry*

API Standard 20D, *Qualification of Nondestructive Examination Services for Equipment Used in the Petroleum and Natural Gas Industry*

API Standard 20G, *Welding Services for Equipment Used in the Petroleum and Natural Gas Industry*

API Standard 20H, *Heat Treatment Services—Batch Type for Equipment Used in the Petroleum and Natural Gas Industry*

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API Standard 20N, *Heat-Treatment Services – Continuous Furnace for Equipment Used in the Petroleum and Natural Gas Industry*

API Standard 20P, *Qualification of Applicators of Coating/Plating Services for Equipment Used in the Petroleum and Natural Gas Industry*

ISO 9001¹, *Quality Management Systems, Requirements*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO 17050-1, *Conformity assessment – Supplier's declaration of conformity – Part 1: General requirements*

3 Terms, Definitions, and Abbreviations

For purposes of this document, the terms and definitions given in API Spec. Q1 and the following shall apply.

3.1 Terms and Definitions

3.1.1

acceptance criteria

Specified limits of acceptability applied to process or product characteristics.

3.1.2

assessment

An independent process of evaluating an organization to determine compliance or the ability to comply, with expectations.

NOTE Examples include HSE, alignment with organizational values, product and service capability, capability to meet defined output requirements.

3.1.3

audit

A systematic, independent process of evaluating a system or process through objective evidence and/or observation to determine a) conformance with defined specifications/controls, and b) conformance to meet defined output requirements.

3.1.4

broker

An organization that acts as an intermediary between two or more parties for machining services.

3.1.5

calibration status

A physical status indicator attached to or identified with the measurement or monitoring device indicating its current status of calibration.

3.1.6

coating

Application of a material to surfaces of a component where resulting conformance determination requires more than visual inspection.

NOTE Coating does not include painting for cosmetic purposes.

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3.1.7

competence

The ability to apply knowledge and skills to achieve intended results.

3.1.8

conformity

Fulfillment of a requirement.

3.1.9

declaration of conformity

Demonstration by a person or supplier of machining services that specified requirements are fulfilled.

3.1.10

field machining

Location outside of the machining service's facility.

3.1.11

heat treatment

Specified, timed sequence of controlled heating and cooling of materials for the purpose of changing physical or mechanical properties.

3.1.12

machining services

A controlled material-removal process, such as cutting, electric discharge machining, electrochemical machining, grinding, honing, milling, turning, threading, and drilling.

3.1.13

on-site

The machining services performed at the supplier's facility.

3.1.14

outsource (outsourced activities)

Function or process that is performed by an external supplier on behalf of the organization.

3.1.15

plating

The deposition of ductile metals onto substrates using mechanical, electrolytic, thermal and/or chemical energy.

3.1.16

qualification

A process to demonstrate the ability to fulfill specified requirements.

3.1.17

record

A document stating results achieved or providing evidence of activities performed.

3.1.18

remote audits and assessments

remote activities are performed at any place other than the location of the facility being audited or assessed.

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**3.1.19
rework**

The use of machining services to restore the product to specification requirements.

**3.1.20
technical audit**

An audit that evaluates requirements of specifications and/or specified requirements against a machining services supplier's practices and/or capabilities.

**3.1.21
technical authority**

A competent and technically qualified person with the authority, responsibility, and accountability to establish, monitor, and approve technical standards and processes.

NOTE Technical authority may also be considered a Subject Matter Expert (SME).

**3.1.22
traceability**

The ability to verify the history and delivery location of an item by means of documented record identification.

3.2 Abbreviations

COC certificate of conformity

MQL machining quality level

NDE nondestructive examination

QMS quality management system

4 Machining Services Supplier Qualification

4.1 Minimum Requirements

4.1.1 Facilities and Equipment

4.1.1.1 In order to conform to this standard, the machining services supplier shall have the following on-site capability to maintain the integrity of the machining services, at a minimum:

- a) building or enclosure;
- b) machining services;
- c) handling and lifting equipment appropriate for the machining service; and
- d) inspection equipment adequate for the characteristics being inspected.

4.1.1.2 For field machining, the degree of protection shall include:

- a) protection against environmental conditions, to the extent necessary, to protect equipment and provide conforming product

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4.1.2 Activities

The machining services supplier shall have the equipment and personnel to perform the following required activities:

- a) receiving inspection;
- b) machining;
- c) marking; and
- d) final inspection.

4.2 Machining Quality Levels (MQL)

4.2.1 General

Three machining services supplier quality levels—MQL 1, MQL 2 and MQL 3—are defined in this standard.

Table 1 provides a reference of the requirements from this standard that a machining services supplier shall meet for the corresponding MQL.

4.2.2 MQL 1 Machining Services Supplier

The base level of qualification to ensure that the machining service provided meets specific customer and industry requirements is MQL 1. A MQL 1 machining services supplier, at a minimum, shall have a quality management system.

The MQL 1 machining services supplier shall determine the processes needed for the management of machining services. A MQL 1 machining services supplier shall supply the machining services defined in 3.1.10.

The MQL 1 machining services supplier shall conform to the QMS elements identified in Section 5.

4.2.3 MQL 2 Machining Services Supplier

The MQL 2 machining services supplier shall establish, document, implement, and maintain a QMS in conformity with ISO 9001, with the addition of the QMS requirements defined in Section 5, as listed in Table 1.

Qualification to MQL 2 also qualifies a machining services supplier to MQL 1.

4.2.4 MQL 3 Machining Services Supplier

4.2.4.1 MQL 3 QMS Requirements

The MQL 3 machining services supplier shall establish, document, implement, and maintain a QMS in conformity with API Specification Q1, with the addition of the QMS requirements defined in Section 5, as listed in Table 1.

An exclusion to the API Specification Q1, Section on Testing, Measuring, Monitoring, and Detection Equipment, is not permitted.

NOTE The MQL 3 machining services supplier may perform or procure, from approved service suppliers, raw material and/or services, such as machining, material testing, NDE, heat treatment, plating coating, and welding.

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Qualification to MQL 3 also qualifies a machining services supplier to MQL 2 and MQL 1.

Table 1—Quality Management System Requirements

QMS Requirements	MQL 1 (see 4.2.2)	MQL 2 (see 4.2.3)	MQL 3 (see 4.2.4)
Base requirements	Section 5 of this standard	ISO 9001	API Spec Q1
Competency	5.2	--	--
Equipment maintenance	5.3	--	--
Test, measuring, and monitoring equipment	5.4	5.4.3 5.4.5 5.4.8.2	5.4.8.2
Document control	5.5	--	--
Customer-owned property	5.6	--	--
Order review	5.7	--	--
Identification and traceability	5.8	5.8 b), c), d)	5.8 b)
Inspection requirements	5.9.1 5.9.2 5.9.3 5.9.4	5.9.1.2 5.9.1.3	5.9.1.2 5.9.1.3
Nonconforming product	5.9.5	--	--
Preservation of product	5.10	--	--
Records	5.11	5.11	--
Continued conformity of the QMS	5.12	Not applicable	Not applicable
Supplier control	Prohibited from purchasing material or outsourcing of an activity (see 6.1)	Purchasing material or outsourcing of an activity from - suppliers per ISO 9001 + 6.2	Purchasing of material and outsourcing of an activity from approved suppliers per API Q1 + 6.3

5 QMS Requirements

5.1 General

A machining services supplier shall establish, document, implement, and maintain a QMS that conforms to the requirements specified in this section. In addition, the requirements applicable to a specific MQL specified in Section 4 shall apply. Table 1 provides an outline of the QMS requirements for each MQL.

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5.2 Personnel Competency Requirements

Personnel performing machining and/or inspection shall be assessed by the machining services supplier to have competence based on the appropriate education, training, skills, and/or experience.

NOTE 1 Personnel competency is addressed in API Specification Q1 and ISO 9001.

NOTE 2 See Table 2 for competency requirements of outsourced activity provider personnel.

NOTE 3 In some cases, API product specifications place specific responsibilities on the equipment manufacturers to demonstrate the competency of personnel performing operations such as measurement and inspections.

5.3 Equipment Maintenance

The machining services supplier shall maintain the machines used to provide the machining services according to a schedule defined by the machining services supplier.

NOTE 1 Maintenance could include checking for alignment and, where applicable, accuracy of positions.

NOTE 2 Equipment maintenance is addressed in API Specification Q1 and ISO 9001.

5.4 Testing, Measuring, and Monitoring Equipment

5.4.1 Testing, Measuring, and Monitoring Equipment Selection

Equipment shall be selected based on the measurement to be performed, including the required accuracy and resolution of the equipment and measuring process. The equipment used for the measurement shall be capable of achieving the measurement accuracy or measurement uncertainty required to provide a valid result. Where practical the measurement uncertainty shall not exceed 25% of the characteristics tolerance limit. The measurement uncertainty may be determined through measurement studies, equipment manufacturer's accuracy statements, calibration certificates, or other recognized methodologies deemed appropriate by a qualified person.

NOTE The *Handbook on Dimensional Measurement* illustrates various examples of equipment selection.

5.4.2 Calibration System Requirement

A calibration system shall be established, documented, implemented, and maintained.

Equipment shall be calibrated in accordance with detailed documented procedures that identifies the calibration criteria and steps for calibration.

When equipment calibration activities are outsourced, the calibration laboratory shall conform to ISO 17025.

This requirement does not apply to proprietary and customer-owned equipment.

5.4.3 Equipment

Testing, measuring, and monitoring equipment used to determine product conformity to requirements shall be controlled, maintained, and:

- a) identified with a unique identifier (see 5.4.5);
- b) calibrated or verified, or both, against measurement standards at specified intervals;

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NOTE Verification against identified acceptance criteria is performed on nonadjustable equipment.

- c) have the calibration status identifiable by the user;
- d) used only within the calibrated range;
- e) safeguarded from adjustments that would invalidate the measurement result or the calibration status;
- f) protected from damage and deterioration during handling, maintenance, and storage; and
- g) used under environmental conditions that are suitable for the calibrations, inspections, measurements, and tests being carried out.

5.4.4 External Equipment

When the equipment is provided from a source external to the machining services supplier, including third-party, proprietary, employee-owned, and customer-owned equipment, the machining services supplier shall verify that the equipment is suitable and shall document evidence of conformity to the requirements of section 5.4.

5.4.5 Unique Identification

The unique identifier shall allow traceability to the date of calibration, calibration due date, and identification of the individual who performed the calibration.

Measuring equipment shall be identified with its current calibration status. The identification may be in the form of a tag, color code, or other suitable means so that the calibration status is readily determined by the equipment user.

5.4.6 Monitoring and Measuring Equipment Registry

The machining services supplier shall maintain a registry of the required testing, measurement, and monitoring equipment used to determine product conformity to requirements. The registry shall include the unique identification for each piece of equipment and provide traceability back to the calibration records associated with the equipment.

5.4.7 Out-of-Calibration Equipment

Whenever the measuring and monitoring equipment is determined to be out of calibration, it shall be removed from service. An assessment of the validity of previous measurements using the out-of-calibration equipment shall be performed. This assessment shall include:

- a) actions to be taken on the affected product;
- b) actions to be taken on the out-of-calibration equipment; and
- c) required notifications to the customer if the suspect product has been shipped.

Records of the results of calibration, verification, and remedial actions shall be maintained.

5.4.8 Calibration Standards

NOTE Test, measuring, and monitoring equipment is addressed in API Specification Q1 and ISO 9001.

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5.4.8.1 Calibration standards shall be traceable to the applicable national or international standards; where no such standards exist, the basis used for calibration shall be recorded.

5.4.8.2 Master calibration standards used to calibrate measuring equipment or working standards shall be checked and approved at least once every three years by an independent outside agency with traceability to the applicable recognized national or international standards agency.

NOTE A recalibration interval of less than three years may be required based upon environment and usage.

5.4.9 Calibration Frequency

5.4.9.1 Calibration intervals for measuring and test equipment shall be established based on repeatability, amount of usage, environment and past history for that type of instrument.

5.4.9.2 For standard, adjustable, measurement tools the initial calibration interval shall be three months until a recorded calibration history for that instrument can be established. Intervals may then be lengthened or shortened. The calibration interval cannot be increased by more than twice the previous interval and shall not exceed more than one year.

5.4.9.3 Non-standard, or non-adjustable measurement devices such as surface plates, threaded plug / ring gauges, co-ordinate measuring machines, optical comparators, etc. shall be calibrated initially and the calibration interval set based on equipment type, calibration history, usage, and operating environment. Calibration intervals shall not exceed three years for this type of equipment.

5.4.9.4 Instruments and calibration standards that have not been used during the calibration interval and that have been maintained in accordance with defined practice may have their calibration cycle extended for an amount equal to the designated cycle.

5.5 Document Control

The machining services supplier shall ensure that the documentation used to machine components meets customer-specified requirements.

Drawings, specifications, and other customer-supplied documentation are considered customer property and shall be controlled as identified in 5.6.

NOTE Document control is addressed in API Specification Q1 and ISO 9001.

5.6 Customer-Owned Property

The machining services supplier shall ensure the preservation of customer-owned property, including the safeguarding of intellectual property and data, while under control of the machining services supplier.

The machining services supplier shall report to the customer any loss, damage, or unsuitability for use of customer-owned property.

NOTE Customer-owned property is addressed in API Specification Q1 and ISO 9001

5.7 Order Review

5.7.1 Review

An order review shall be conducted prior to the machining services supplier's commitment to perform requested service. The order review shall address the following, at a minimum:

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- a) Specified customer requirements are identified, reviewed, and understood;
 - b) The machining services supplier has the capability to meet the specified customer requirements; and
- Any deviations and/or clarifications accepted by the purchaser shall be documented.

5.7.2 Communication

Where contract requirements are changed, the machining services supplier shall ensure that relevant documents are amended and that affected personnel are made aware of the changed requirements.

5.7.3 Order Review Records

Records of the order review, including changes to requirements, shall be maintained.

NOTE 1 Order entry is addressed in API Specification Q1 and ISO 9001.

NOTE 2 Records of order review could include:

- a) signature or initialing and dating of the order;
- b) communications back to the purchaser.

5.8 Identification and Traceability

The machining services supplier shall define the requirements used for identification and traceability. Requirements shall include, as a minimum:

- a) the method for verifying identification and traceability marks, including their maintenance from receipt of material, through processing and shipment of finished product;
- b) the method for marking the product that is not detrimental to the product and maintaining traceability to the customer's specified requirements;
- c) the method for maintaining traceability of product after any processing where the original marking is removed; and
- d) the method for distinguishing between in-process, completed, and nonconforming material.

NOTE Identification and traceability are identified in API Specification Q1 and ISO 9001.

5.9 Inspection Requirements

5.9.1 General

5.9.1.1 The machining services supplier shall identify requirements for receiving, in-process, and final inspections. Inspection requirements, including customer requirements, where specified, shall be incorporated into the machining services supplier's inspection processes.

NOTE Customers may provide inspection requirements in the form of, but not limited to, a quality plan (QP), inspection and test plan (ITP), manufacturing process specification (MPS), process control plan (PCP), and quality activity plan (QAP).

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5.9.1.2 The machining services supplier shall record the unique identifier of the testing, measuring, and monitoring equipment used to perform inspections.

5.9.1.3 Where sampling is used, the plan shall be identified and documented and in conformance with a national or international standard. When required by contract, the sampling plan shall be approved by the customer.

NOTE Inspection requirements are identified in API Specification Q1 and ISO 9001.

5.9.2 Receiving Inspection

The machining services supplier shall verify that material received meets the customer's description and is free of damage from handling and/or shipping. Any damage shall be reported to the customer in accordance with the requirements of Section 5.10.

5.9.3 In-process and Final Inspection

The machining services supplier shall verify through in-process and/or final inspection that the machined product meets the customer's requirements. This includes dimensions, marking, packaging, and documentation requirements.

NOTE For single-step manufacturing processes (e.g. threading), in-process and final inspection and testing can be performed as one activity.

5.9.4 Inspection Records

Records demonstrating evidence of conformity with the acceptance criteria shall be maintained.

5.9.5 Nonconforming Product

Nonconforming products shall be identified and segregated to prevent unintended use or delivery.

The customer shall be notified when nonconforming product cannot be reworked into conformance with original requirements.

Product shall not be subjected to processes that potentially affect mechanical properties of the product without customer agreement.

NOTE 1 For example: thermal processes, welding, metalworking, and plating.

Records of customer notification and approvals shall be maintained.

NOTE 2 Control of nonconforming product requirements are identified in API Specification Q1 and ISO 9001 .

NOTE 3 Some customers require individual identification of products released under concession.

5.10 Preservation of Product

The machining services supplier shall prevent damage and deterioration of product, including identification and traceability markings.

Packaging for storage or transit shall be in accordance with the customer's purchasing document.

NOTE 1 Product preservation requirements are identified in API Specification Q1 and ISO 9001.

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NOTE 2 Damage or deterioration can occur from one or more of the following mechanisms:

- a) dissimilar metal contact and/or contamination;
- b) residual chemical contamination from cleaning solutions and markers;
- c) environmental exposure for alloys susceptible to corrosion;
- d) residual magnetism; or
- e) mechanical damage from handling.

5.11 QMS Records

Records shall be established and controlled to provide evidence of conformity to requirements. Records shall remain legible, identifiable, and retrievable.

Records shall be retained for a minimum of ten years after shipment or as required by the customer, whichever is longer.

NOTE Record requirements are identified in API Specification Q1 and ISO 9001.

5.12 Continued Conformity of the QMS

The machining services supplier shall evaluate the QMS to maintain continued conformity of the QMS to Section 5.1 through 5.12. The evaluation shall be performed at least every 12 months (no later than the end of the same calendar month as the prior year evaluation).

6 Control of Suppliers

NOTE Additional requirements for control of suppliers and products may be contained in referenced API product specifications.

6.1 Control of MQL 1 Suppliers

MQL 1 machining services suppliers are not permitted to purchase raw materials or outsource activities.

6.2 Control of MQL 2 Suppliers

MQL 2 machining services suppliers shall qualify suppliers in accordance with ISO 9001.

Where customer-specified suppliers do not meet the supplier qualification requirements of the machining services supplier, the customer shall be notified.

6.3 Control of MQL 3 Suppliers

MQL 3 machining services suppliers shall qualify service suppliers in accordance with API Specification Q1 and the requirements of Table 2. A registry of approved suppliers shall be maintained.

Where customer-specified suppliers do not meet the supplier qualification requirements of the machining services supplier, the customer shall be notified.

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Table 2—Service Supplier Qualification Requirements

Service	Qualification Requirements
Machining	<p>Verification of capabilities and controls through an on-site audit or a remote technical assessment that addresses the following elements of Section 5, at a minimum:</p> <ul style="list-style-type: none"> — Test, Measuring, and Monitoring Equipment (5.4) — Customer Property (5.6) — Identification and Traceability (5.8) — Inspection (5.9) — Preservation of Product (5.11) — Records (5.12) <p>For suppliers performing machining services, evidence of conformance to API Specification Q1 or Standard 20M, MQL 2, or MQL 3 is acceptable in lieu of an audit or remote technical assessment.</p>
Material testing	<p>Verification of capabilities and controls via an on-site audit or remote technical assessment that addresses the following elements of ISO 17025, at a minimum:</p> <ul style="list-style-type: none"> — Calibration of equipment — Validation of sample preparation and test methods — Conformity with applicable international standards — Identification and traceability — Competency of personnel — Record retention <p>Verification of ISO 17025 accreditation for the required service is acceptable in lieu of an audit or remote technical assessment.</p>

Table 2—Service Supplier Qualification Requirements (continued)

Heat treatment	<p>Verification of capabilities and controls through an on-site technical audit or remote technical assessment addressing the following elements, at a minimum:</p> <ul style="list-style-type: none"> — Furnace instrumentation — Furnace calibration — Test, measuring, and monitoring equipment — Identification and traceability — Inspection and testing — Records <p>For suppliers performing batch heat treatment, evidence of conformance to API Standard 20H or performing inline heat treatment, evidence of conformance to API Standard 20N is acceptable in lieu of an audit or remote technical assessment.</p>
Nondestructive examination	<p>Verification of capabilities and controls through an on-site technical audit or remote technical assessment addressing the following elements, at a minimum:</p> <ul style="list-style-type: none"> — Personnel qualification to Level II or Level III — Operational procedures — Equipment calibration and maintenance — Process revalidation — Records <p>Evidence of conformance to API Standard 20D is acceptable in lieu of an audit or remote technical assessment.</p>
Plating and coating	<p>Verification of capabilities and controls through an on-site technical audit or remote technical assessment addressing the following elements, at a minimum:</p> <ul style="list-style-type: none"> — Personnel qualification — Operational procedures

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	<ul style="list-style-type: none"> — Base metal check — Surface preparation — Post treatment, when applicable — Inspection, test, and acceptance criteria — Equipment calibration and maintenance — Contaminant control — Plating tank and cleaning tank monitoring — Process revalidation — Records <p>Evidence of conformance to API Standard 20P is acceptable in lieu of an audit or remote technical assessment.</p>
Welding	<p>Verification of capabilities and controls through an on-site technical audit or remote technical assessment addressing the following elements, at a minimum:</p> <ul style="list-style-type: none"> — Personnel qualification — Welder qualification records (WQR) — Welder continuity records — Welding inspector — Operational procedures — Procedure qualification record (PQR) — Welding procedure specification (WPS) — Consumable controls — Inspection, test, and acceptance criteria — Equipment calibration and maintenance — Process revalidation — Records <p>Evidence of conformance to API Standard 20G is acceptable in lieu of an audit or remote technical assessment.</p>

7 Documentation

7.1 MQL 1 Documentation

7.1.1 General

7.1.1.1 For a machining services supplier to meet the requirements of MQL 1, the following documentation shall be required:

- a) certificate of conformity to customer requirements; and
- b) declaration of conformity to API Standard 20M.

NOTE The purpose of the declaration of conformity is to give assurance of conformity of the machining services to API Standard 20M and to make clear who is responsible for that conformity and declaration.

7.1.1.2 The documentation listed above shall be:

- a) retained by the machining services supplier from the date of service for ten years; and
- b) provided to the customer.

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7.1.2 Customer Certificate of Conformity (COC)

The COC provided to the customer shall:

- a) contain a statement that indicates the machining services provided meet the customer's requirements;
- b) include the scope(s) of work and identification of product(s) for which the machining services were provided;
- c) be endorsed by a technical authority to make the statement; and
- d) be dated.

7.1.3 Declaration of Conformity to API Standard 20M

7.1.3.1 General

The declaration of conformity shall be in conformance with ISO 17050-1 or the requirements stated in 7.1.3.2 through 7.1.3.6. The declaration of conformity may be in the form of a hard copy, electronic media, or any other suitable medium.

7.1.3.2 Basis

The declaration of conformity shall be based on results of an appropriate type of conformity assessment activity (e.g. testing, measurement, auditing, inspection, or examination) conducted by either:

- a) the machining services supplier; or
- b) a party contracted to perform the assessment.

It is recommended that the person reviewing the conformity assessment results be different from the signatory.

7.1.3.3 Duration and Coverage

Where a declaration of conformity is for machining services of similar types, it shall cover each individual service provided or product produced. Where a declaration of conformity is for similar products or services delivered over a period of time, it shall cover each product or service as delivered or accepted.

For mass-produced products, it shall be sufficient to give the name, type, model number, and batch number. For mass-produced products, it shall not be necessary to give individual serial numbers on the declaration of conformity.

7.1.3.4 Content

At a minimum, the declaration of conformity shall contain the following:

- a) unique identification number/reference of the declaration of conformity document;
- b) the name and contact address of the machining services supplier or party contracted to perform the conformity assessment;
- c) the identification of the machining services or products produced that are covered by the declaration of conformity document;

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- d) the statement of conformity to API Standard 20M;
- e) the date and place of issue;
- f) the signature (or equivalent sign of validation), name, and function of the technical authority acting on behalf of the issuer; and
- g) any limitation on the validity of the declaration of conformity.

7.1.3.5 Changes

The machining services supplier shall re-evaluate the validity of the declaration of conformity, in the event of:

- a) changes significantly affecting the machining services processes, acceptance criteria, or products produced;
- b) changes in this standard;
- c) changes in the ownership or structure of management of the machining services supplier, if relevant; or
- d) relevant information indicating that the machining services processes or products produced may no longer conform to the specified requirements.

7.1.3.6 Declaration of Conformity Records

Records of the conformity assessment activity required by 7.1.3.2 and records of the re-evaluation of the validity of the declaration of conformity required by 7.1.3.5 shall be maintained.

7.2 MQL 2 Documentation

The machining services supplier shall maintain the following documentation to meet the requirements of MQL 2:

- a) COC to customer requirements in accordance with 7.1.2; and
- b) When subcontracted services are performed by a customer-approved supplier, a COC to the machining services supplier requirements and documentation of the following outsourced activities:
 - 1) Machining—records of inspection
 - 2) Material testing—material test results
 - 3) Heat treatment records
 - i) Furnace charts (digital or hard copy)
 - 1. Actual temperature
 - 2. Actual times at temperature
 - ii) Quench media

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- iii) Record of hardness testing, if performed
- 4) NDE—record of qualification and annual near-vision acuity and color contrast eye examination for individual(s) performing the NDE
- 5) Plating and coating—COC and applicable test results
- 6) Welding
 - i) Weld procedure specification
 - ii) Weld procedure qualification record
 - iii) Record of welder qualification
 - iv) Record of inspection results

7.3 MQL 3 Documentation

The machining services supplier shall maintain the following documentation to meet the requirements of MQL 3:

- a) COC to customer requirements in accordance with 7.1.2; and
- b) When subcontracted services are performed by a supplier, a COC to the machining services supplier requirements and documentation of the following outsourced activities, including the supplier's name and address:
 - 1) Machining—record of inspection
 - 2) Material testing
 - i) Material test results
 - ii) Certificate of ISO 17025 accreditation, if available
 - 3) Heat treatment records
 - i) Furnace charts (digital or hard copy)
 - 1. Actual temperature
 - 2. Actual times at temperature
 - ii) Quench media
 - iii) Record of hardness testing, if performed
 - 4) NDE—record of qualification and annual near-vision acuity and color- contrast eye examination for individual(s) performing the NDE
 - 5) Plating and coating—COC and applicable test results
 - 6) Welding

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- i) Weld procedure specification
- ii) Weld procedure qualification record
- iii) Record of welder qualification
- iv) Record of inspection results

Ballot Draft

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