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Aerospace Basic Quality System Standard

CANCELLATION NOTICE

This document has been declared "CANCELLED" as of November 1999 and has been superseded by AS9100. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index noting that it is superseded by AS9100.

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QUESTIONS REGARDING THIS DOCUMENT:
TO PLACE A DOCUMENT ORDER:
SAE WEB ADDRESS:

(724) 772-8510
(724) 776-4970
<http://www.sae.org>

FAX: (724) 776-0243
FAX: (724) 776-0790

NOTICE

This revision contains only editorial changes to the Reference Section.

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1. SCOPE:

To assure customer satisfaction, aerospace industry manufacturers must produce world class quality products at the lowest possible cost. This document standardizes, to the greatest extent possible, the quality system requirements of the aerospace industry. Standardization of compliance requirements results in cost savings due to the elimination or reduction of unique requirements developed for each different customer.

1.1 Quality Philosophy:

Eliminating the causes of defects is paramount to continuous quality improvement. Process activities should, to the greatest extent practicable, be directed toward defect prevention methods, such as statistical process control and variability reduction, error proofing, and visual controls, rather than defect detection.

Responsibility for quality ultimately rests with those organizations having ownership of the processes affecting product quality.

2. REFERENCES:

ANSI/ISO/ASQC Q9001:1994; Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation and Servicing (a word-for-word equivalent to ISO9001) has been reproduced in this document with the permission of the American Society for Quality. The complete standard can be obtained from the American Society for Quality, 611 E. Wisconsin Ave., Milwaukee, WI 53202. Copyright remains with the American Society for Quality.

Q9001 (ISO9001) Section 4 requirements are reproduced in Section 4 of this document. Additional industry requirements and notes in Section 4 are shown in bold.

It is emphasized that the quality system requirements specified in this standard are complementary (not alternative) to the technical (product) specified requirements and applicable law and regulatory requirements.

Notes are for guidance only and are not a part of the requirements of this document.

3. DEFINITIONS:

For the purposes of this document, the definitions given in International Standard ISO 8402, Quality Management and Quality Assurance - Vocabulary, and the following definitions apply:

KEY CHARACTERISTICS: The features of a material or part whose variation has a significant influence on product fit, performance, service life, or manufacturability.

REGRADE: A disposition of a nonconformity that (1) determines that the product is not acceptable for its original intended design, and (2) directs the product to be redesignated or modified for an alternate use.

4. QUALITY SYSTEM REQUIREMENTS:

4.1 Management Responsibility:

4.1.1 Quality Policy: The supplier's management with executive responsibility shall define and document its policy for quality, including objectives for quality and its commitment to quality. The quality policy shall be relevant to the supplier's organizational goals and the expectations and needs of its customers. The supplier shall ensure that this policy is understood, implemented and maintained at all levels of the organization.

4.1.2 Organization:

4.1.2.1 Responsibility and Authority: The responsibility, authority and the interrelation of personnel who manage, perform and verify work affecting quality shall be defined and documented, particularly for personnel who need the organizational freedom and authority to:

- a. initiate action to prevent the occurrence of any nonconformities relating to the product, process and quality system;
- b. identify and record any problems relating to the product, process and quality system;
- c. initiate, recommend or provide solutions through designated channels;
- d. verify the implementation of solutions;
- e. control further processing, delivery or installation of nonconforming product until the deficiency or unsatisfactory condition has been corrected.

4.1.2.2 Resources: The supplier shall identify resource requirements and provide adequate resources, including the assignment of trained personnel (see 4.18), for management, performance of work and verification activities including internal quality audits.

4.1.2.3 Management Representative: The supplier's management with executive responsibility shall appoint a member of the supplier's own management who, irrespective of other responsibilities, shall have defined authority for:

- a. ensuring that a quality system is established, implemented and maintained in accordance with this document, and
- b. reporting on the performance of the quality system to the supplier's management for review and as a basis for improvement of the quality system.

NOTE: The responsibility of a management representative may also include liaison with external parties on matters relating to the supplier's quality system.

4.1.2.4 Suppliers having a quality assurance activity performed by an individual process owner (e.g., operator, buyer, planner) shall have procedures that define the specific tasks and responsibilities that are authorized and the corresponding requirements and training necessary to perform those tasks.

4.1.3 Management Review: The supplier's management with executive responsibility shall review the quality system at defined intervals sufficient to ensure its continuing suitability and effectiveness in satisfying the requirements of this document and the supplier's stated quality policy and objectives (see 4.1.1). Records of such reviews shall be maintained (see 4.16).

4.2 Quality System:

4.2.1 General: The supplier shall establish, document and maintain a quality system as a means of ensuring that product conforms to specified requirements. The supplier shall prepare a quality manual covering the requirements of this document. The quality manual shall include or make reference to the quality system procedures and outline the structure of the documentation used in the quality system.

NOTE: Guidance on quality manuals is given in ISO 10013.

4.2.2 Quality System Procedures: The supplier shall:

- a. prepare documented procedures consistent with the requirements of this document and the supplier's stated quality policy;
- b. effectively implement the quality system and its documented procedures;
- c. **ensure that quality system procedures are readily available to personnel who are responsible for compliance to requirements, and to customer and/or regulatory agency representatives.**

For the purposes of this document, the range and detail of the procedures that form part of the quality system shall be dependent upon the complexity of the work, the methods used, and the skills and training needed by personnel involved in carrying out the activity.

NOTE: Documented procedures may make reference to work instructions that define how an activity is performed.

4.2.3 Quality Planning: The supplier shall define and document how the requirements for quality will be met. Quality planning shall be consistent with all other requirements of a supplier's quality system and shall be documented in a format to suit the supplier's method of operation. The supplier shall give consideration to the following activities, as appropriate, in meeting the specified requirements for products, projects or contracts:

- a. the preparation of quality plans;
- b. the identification and acquisition of any controls, processes, equipment (including inspection and test equipment), fixtures, resources and skills that may be needed to achieve the required quality;
(1) the design, manufacture, and use of tooling so that variable measurements can be taken, particularly for key characteristics;
- c. ensuring the compatibility of the production process, installation, servicing, inspection and test procedures and the applicable documentation;
- d. the updating, as necessary, of quality control, inspection and testing techniques, including the development of new instrumentation;
- e. the identification of any measurement requirement involving capability that exceeds the known state of the art, in sufficient time for the needed capability to be developed;
- f. the identification of suitable verification at appropriate stages in the realization of product;
(1) the identification of in-process verification points when adequate verification of conformance cannot be performed at a later stage of realization;
- g. the clarification of standards of acceptability for all features and requirements, including those which contain a subjective element;
- h. the identification and preparation of quality records (see 4.16);
- i. **the identification and selection of subcontractors capable of meeting quality requirements and the appropriate flowdown of requirements (see 4.6.5);**
- j. **the establishment of appropriate process controls and development of control plans if key characteristics have been identified by the customer.**

NOTE: The quality plans referred to (see 4.2.3a) may be in the form of a reference to the appropriate documented procedures that form an integral part of the supplier's quality system.