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Standard Specification for Quality Assurance for Manufacturers of Aircraft Systems¹

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1. Scope

1.1 This specification establishes the minimum requirements for a Quality Assurance System (QAS) for manufacturers of an aircraft article(s) that is covered by the scope of Committee F39 on Aircraft Systems.

1.2 This specification applies to the manufacturing of aircraft articles or systems and provides information and describes criteria for establishing and maintaining a quality system.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Terminology

2.1 Definitions:

2.1.1 *article, n*—a material, part, component, process, or appliance.

2.1.2 *direct to stock (DTS), n*—parts that are accepted into inventory without inspection.

2.1.3 *manufacturer's statement of conformity, n*—a document certifying that the article meets the manufacturer's design requirements.

2.1.4 *quality assurance manual (QAM), n*—a document that provides an overview of the quality policies and key requirements of the QAS. The QAM is a basic source of reference and overview of the QAS.

2.1.5 *quality assurance record (QAR), n*—the record showing compliance with the QAS for each article produced.

¹ This specification is under the jurisdiction of ASTM Committee F39 on Aircraft Systems and is the direct responsibility of Subcommittee F39.04 on Aircraft Systems.

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2.1.6 *quality assurance system (QAS), n*—a system of processes and controls used by a manufacturer to verify and validate that the article meets its specified requirement.

2.2 Abbreviations:

2.2.1 *DTS*—Direct to Stock

2.2.2 *MRB*—Material Review Board

2.2.3 *QA*—Quality Assurance

2.2.4 *QAA*—Quality Assurance Administration

3. Quality Assurance System

3.1 A QAS shall ensure that each process and service is performed in accordance with specifications containing definitive standards of quality. Manufacturers shall develop and implement a QAS in accordance with the requirements established within this specification. The elements of the QAS established herein include the following:

3.1.1 Quality Assurance Manual (QAM),

3.1.2 Document Control,

3.1.3 Product Configuration Control,

3.1.4 Supplier Control,

3.1.5 Product Change Management,

3.1.6 Calibration and Test Equipment,

3.1.7 Material Control,

3.1.8 Inspections,

3.1.9 Identification and Handling of Nonconforming Material,

3.1.10 Assignment of QA Duties,

3.1.11 Self Evaluation (Audit), and

3.1.12 Quality Assurance Record (QAR).

3.2 *Quality Assurance Manual (QAM)*—Each manufacturer shall document their QAS in the form of a QAM.

3.2.1 The QAM includes the quality policy and an overview of the key requirements contained in 3.1.2 through 3.1.12. It is the source of reference for all matters dealing with the QAS.

3.2.2 The manufacturer shall define the system and procedures for each key requirement of the QAS contained in 3.1.2 through 3.1.12. The key requirements of the QAS may be in separate documents or may be contained in a single document.

3.2.3 The QAM itself and each of the QAS elements included or referenced shall be controlled as production documentation in accordance with 6.6.