CIVIL AVIATION
SAFETY AUTHORITY
AUSTRALIA

System of Quality Control COA 201

Design & Manufacture of Aircraft, Aircraft Components and Materials for Complex Locally-designed Products

CAR 30(2A) and 30A

Applicant: ..... File Ref: ..... DO: .....

An applicant's eligibility for a CAR 30 Certificate of Approval for design is determined by Airworthiness Engineering staff.

Responsibility for issuing the Certificate of Approval is coordinated between the appropriate staff at the applicant's local CASA District Office, when and where there is a demonstrable need.

Organisational and other procedures that are required by the designer's Instrument of Appointment, must be reflected in the system of quality control (the "system").

Procedures should ensure that the design information is sufficient to replicate any item and show compliance of that item to the approved design. If applicable, the procedures should also cover the item's installation, continuing airworthiness, and conditions for intended use and safe operations.

As applicable, use this checklist in conjunction with:

- COA 200: System of Quality Control and Procedures Manual: General
- COA 202: System of Quality Control: System of Computer Control.

Design

Yes, No or N/A

Organisational Structure

Does the system contain:

- Clear definitions of personnel responsibilities .....
- The name and signature for each person with nominated responsibilities? .....

Are procedures manuals associated with Instrument of Appointment Holder(s) contained within the system? .....

Are individual Instrument(s) of Appointment together with the individual ARNs referenced by the system? .....

Do all persons nominated in the application for design hold an Instrument of Appointment pursuant to CAR 22, 35, 36 or 36A? .....

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Yes, No or N/A

Control of Work

The system should contain the following detailed provisions for the following persons.

Design Coordinator

Procedures for approval of an individual design, or design of a modification or repair, including:

- Design standard(s), compliance, review and coordination .....
- Engineering changes or additions .....
- Checking and verification of design data .....
- Substantiation and certification of tests .....
- Work outside of the limitations and requiring the use of Design Advice (DA2349)
- Inspections and approved data necessary to show conformity. .....

Procedures for a design or engineering data that requires individual or type approval and/or interfacing – e.g., for manufacture, incorporating distribution – including:

- The items listed in individual design above .....
- Approved processes and specifications for the appropriately approved activity .....
- Recognition of other approved data used in or for conformity inspections. .....

Holder of a Certificate of Type Approval including Supplemental Type Certificate or otherwise

Procedures for the original person approving the design, and for that design which is subsequently found flawed in service and/or subject of modification before further flight, including:

- Notification of further instructions in good time, including conditions, inspections and/or approved data, to retain the continued airworthiness of the aircraft .....
- Revoking the design approval. .....

Procedures for extending engineering activities into support of manufacturing, including:

- Recognising engineering responsibilities (as distinct from inspection and conformance) and associated quality assurance .....
- Classifying changes to the type design .....
- Data change control(s) .....
- Reviewing materials, both hardware and software, (including Materials Review Board) .....
- Production ground test .....
- Production flight test .....
- Process specifications .....
- Materials specifications .....
- Supplier qualifications .....
- Service difficulties .....
- Recording and reporting design activities to CASA, including proposals for service bulletins and airworthiness directives .....
- Coordination with administrative procedures, including use of forms, stamps, certifications etc. .....

Yes, No or N/A

Data

Does the system contain procedures for data development processes? .....

Are there procedures for the holding of approved data and for the submission of monthly returns to CASA? .....

Does the system make provisions for the holding of design standards? .....

Accommodation and Amenities

Does the system provide for:

- Drawing boards and instruments .....
- Specialised lighting? .....

Does the applicant have access to copying facilities capable of reproducing the largest drawing likely to be drafted? .....

Manufacture

Organisational Structure

Do staff hold any responsibilities under the Certificate of Approval? .....

Does the system clearly define the responsibilities of:

- Management staff .....
- Inspection staff .....
- Production staff? .....

Are inspection staff sufficiently qualified and/or experienced? .....

Are production staff sufficiently qualified and/or experienced to ensure the repetition of end products? .....

Control of Work

Are the manufacturing procedures fully described in the system, including where appropriate, but not limited to:

- Composites .....
- Welding .....
- Metal forming? .....

Does the system ensure that all manufacturing specifications and processes are approved by CASA or authorised person? .....

Note: *In many instances these procedures need to be in place to manufacture the components necessary for testing during design and certification.*

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Yes, No or N/A

Does the system describe a system of inspection such that the article manufactured can be shown to be in conformance with the approved data? .....

In larger organisations, does the system describe the duties of each inspector such that each inspector:

- Performs only a portion of the total required for certifications .....
- Has different stamps? .....

In relation to certification, does the system include:

- Certification technique – e.g., stamp and initial .....
- Details of stages of inspection and certification .....

  Note: *Usually these duties will be performed by nominated inspectors detached from the original operator.*

- Controls to ensure that only those people who are entitled to certify stages of production do so .....
- Nominated release certification procedures? .....

Do the system procedures outline processes for:

- Dealing with non-conforming products .....
- Acceptability or otherwise of a non-conforming product .....
- Designing and approving changes or rework .....
- Recording decisions and changes? .....

Does the system include:

- Identified testing processes .....
- Certification procedures for tests? .....

  *Note**:*** *The testing requirements may be part of the design.*

Does the system include procedures for:

- Efficient introduction of changes to specifications, materials and processes .....
- Ensuring that any changes are brought to the attention of production and inspection personnel .....
- Ensuring that advice from production staff regarding anomalies or design change requirements detected during production is brought to the attention of appropriate personnel .....
- Determining disposition or rectification for non-conformances found? .....

Does the system include procedures detailing verification techniques/processes? .....

Does the system detail:

- Final acceptance procedures .....
- Dispatch procedures? .....

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Yes, No or N/A

Documentation

Does the system adequately include documentation which:

- Details receipt and control of engineering data and documentation .....
- Ensures that all the materials used in the production of the article can be accurately sourced to the manufacturer .....
- Details receipt and control of production certifications .....
- Is to be used for developing efficient part and serial numbering systems of products that relate to parent drawings and specifications – including batching procedures .....
- Ensures that all components and materials are traceable during production .....
- Allows conformance of a product with approved data to be certified as such .....
- Allows the apparent non-conformance of a product to be investigated satisfactorily .....
- Ensures control of lifed products (and possible re-lifing) .....
- Ensures that all stages of production may be certified? .....

Data

Are there procedures within the system to ensure that data to be used by the design engineer is compliant with the applicable regulations? .....

Are there procedures detailing the limits to which approved data may be used? .....

Product Support

Are there procedures within the system which ensure that where a manufacturer is producing a type certificated item, the engineering/design support arrangements are nominated? .....

Are maintenance manuals, parts manuals etc. required for the finished product? .....

***Note**: These manuals should be a part of the design package if a Certificate of Type Approval/ Type Certificate item.*

Are there procedures to ensure that all recipients of manuals receive amendments as they are issued? .....

Remarks: .....

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Assessment completion date: .....

Name of person performing the assessment: .....