

**WORKING ARRANGEMENT  
ON TYPE VALIDATION AND CONTINUED  
AIRWORTHINESS FOR ARJ21 AIRPLANE**

between

**DIRECTORATE GENERAL OF CIVIL AVIATION  
(DGCA) INDONESIA**

and

**CIVIL AVIATION ADMINISTRATION OF CHINA  
(CAAC)**

36

## PURPOSE

The purpose of this Working Arrangement between Directorate General of Civil Aviation (DGCA), Ministry of Transportation, Republic of Indonesia and the Civil Aviation Administration of China (CAAC) is to define the working relations between the DGCA and the CAAC for DGCA validation of TC of the ARJ21-700 Aircraft produced by the Commercial Aircraft Cooperation of China, Ltd (COMAC).

This Working Arrangement is promulgated in accordance with the Memorandum of Understanding (MOU) on the Acceptance of Airworthiness Statements for Aeronautical Products between Directorate General of Air Communications the Republic of Indonesia and Civil Aviation Administration of China the People's Republic of China signed on 22 May 2000.

## OBJECTIVE

This arrangement is intended to accomplish the following objectives:

- a) Define working procedures under the respective responsibilities of each authority.
- b) Increase visibility of the ARJ21-700 Aircraft certification issues and concerns in a timely manner.
- c) Minimize duplication of certification efforts.

## SCOPE

This arrangement is intended to support the DGCA validation of Type Certificate of the ARJ21-700 aircraft. The provisions of the arrangement are structured where possible to give credit to the inspections, tests, demonstrations, evaluations, and approvals granted by the CAAC.

For that purpose, in addition to the provisions defined in the MOU on the Acceptance of Airworthiness Statements for Aeronautical Products between DGCA, the Republic of Indonesia and CAAC, the People's Republic of China, specific project procedure has been developed for this project to take account, where possible, of the results of the DGCA validation of Type Certificate of the ARJ21-700 Aircraft model. This arrangement is in addition to, and it is not intended to supersede any duties and responsibilities levied upon the signatories by other regulations upon (i.e MOU, directives, or contractual provisions)

## DEFINITIONS

The following notions are defined for purpose of this document:

### **The DGCA List of Differences (DGCA LOD):**

Means the list of those conditions in the DGCA Certification Basis which are different from the CAAC Certification Basis that are necessary to account for all differences between the applicable certification regulations of the DGCA and the CAAC requirements, associated technical policy material and means of compliance

**The DGCA List of Important Differences:**

Means the list of those conditions in the DGCA Certification Basis which are different from the CAAC Certification Basis that are necessary to account of the CAAC and the DGCA requirements, associated technical policy material and means of compliance. A difference will be considered as important if it affects design or will require additional compliance demonstrations

**Certification Action Items (CAI):**

Means a method for describing and tracking the resolution of type certification items requiring special attention occurred during the DGCA validation program and post TC activities.

CAI's shall be developed and issued for the following

- a. To review the suitability of a proposed demonstration of compliance for specific requirements.
- b. To identify areas and justify extent of direct involvement in the compliance finding process by the DGCA team.
- c. To provide the CAAC adequate material to verify compliance demonstrations with DGCA Differences.

**Validation:**

Means Type Certification, or equivalent, of an aircraft following a simplified investigation process by the DGCA Team on behalf of the National Aviation Authorities, based on CAAC Type Certification and focusing on the DGCA LOD.

**Certification Review Item (CRI)/Issue Paper (IP):**

Means a major certification subject and will be raised in the following cases:

- a) To record the process followed to define and record the content of the DGCA certification basis identifying the nature of each requirement.
- b) To develop and administer DGCA Special Conditions.
- c) To administer new DGCA policies, e.g. means of compliance, interpretations.
- d) To administer exceptions, equivalent level of safety findings or exemptions.
- e) To identify the DGCA LOD items.
- f) To deal with novel and unusual design features.
- g) To record the application of new DGCA requirements, if different from CAAC requirements.
- h) To record controversial subjects.
- i) To list specific design changes required for compliance with the DGCA certification basis.
- j) To record Additional National Design Requirements.

**CAAC findings of Compliance**

Means the normal CAAC certification and approval process of evaluating the ARJ21-700 Aircraft to verify compliance with applicable DGCA regulations.

31

## **VALIDATION OF TYPE CERTIFICATE ACTIVITIES**

### **CAAC/DGCA COMMUNICATIONS AND PROCEDURES.**

All formal correspondence between CAAC and DGCA will be between the CAAC ARJ21-700 Aircraft Project Certification Manager (PCM) and the DGCA Project Manager (PM). Direct informal discussion at the technical specialist level is necessary and may include the exchange of technical information. The CAAC ARJ21-700 Aircraft Project Certification Manager (PCM) and the DGCA Project Manager (PM) should always stay in copy. Any meeting(s) the DGCA has with the COMAC on AR21-700 certification matters will be coordinated through DGCA, CAAC and COMAC. The CAAC has the right to attend these meetings. The DGCA will attempt to indicate those particularly warranting the DGCA attendance.

### **DGCA RESPONSIBILITIES**

Considering the Specific Procedures to be applied for that project (see item SCOPE above), DGCA Certification Basis will be established for the ARJ21-700 Aircraft with the principles below:

- a) The DGCA shall establish a certification basis for the product design in accordance with DGCA airworthiness standards and environmental protection requirements for similar product, giving consideration to the standard which were in effect in the DGCA at the time that application was received for the approval of the product type design by the CAAC.
- b) The certification basis defined by the DGCA will consist of airworthiness standards and environmental protection requirements as applied under CAAC certification system, plus any additional technical condition specified by the DGCA to establish an equivalent level of safety in accordance with CASR Part 21, and will be finalized via the agreed Issue Paper for DGCA certification basis.

The DGCA certification basis will be notified to COMAC and CAAC in a DGCA IP.

The DGCA will establish the DGCA LOD starting from the DGCA initial LOD. DGCA will notify the CAAC and COMAC in writing of the DGCA initial LOD and changes there to. DGCA will provide CAAC with appropriate interpretative material to enable CAAC to find compliance, on behalf of the DGCA, with these conditions.

The DGCA and CAAC will agree upon a date by which the delegation to the CAAC for findings of compliance with the DGCA LOD items must be complete.

For the purpose of administering the findings of compliance (e.g. the interpretations to be applied, the means of compliance agreed, the stage at which the compliance finding was delegated to the CAAC) with DGCA LOD items, the DGCA may issue Certification Action Items (CAIs).

The DGCA will identify as early as possible those DGCA LOD and other items for which the DGCA wish to be involved to some degree directly in the demonstration of compliance findings, and will inform the CAAC in writing of the DGCA conclusions concerning its investigation.

The DGCA will notify the CAAC and COMAC of any test witnessing in which DGCA elects to participate for Additional Technical Conditions as necessary, and DGCA will identify normally in CAIs which DGCA LOD and other items, if any, the DGCA wishes to be involved in for the demonstration of compliance findings.

The DGCA will provide a Summary List and a copy of all CRIs, IPs and CAIs, and revisions thereof, to the CAAC, including copies of DGCA correspondence with COMAC relating to CRIs, IPs and CAIs and special interest issues.

The DGCA will notify the CAAC (with copy to the COMAC) concerning the status of each CRI, IP or CAI and will request formal CAAC and COMAC position statements.

The DGCA will provide COMAC and the CAAC with List of Important Difference. The only purpose of this list is to have an accessible overview of all important Difference as noted by the DGCA for the Type Certification of the ARJ21-700 Aircraft which is produced by COMAC.

#### **CAAC RESPONSIBILITIES**

CAAC will find compliance with the DGCA LOD items using DGCA interpretative material (see DGCA Responsibilities).

CAAC will initiate comments on CRIs, IPs and CAIs for which DGCA has requested CAAC position statements, or as considered appropriate by the CAAC.

CAAC will provide DGCA with a formal attesting that CAAC has determined that compliance has been demonstrated with DGCA certification basis.

CAAC will ensure that any substantiating document deemed necessary to find compliance provided in English.

#### **SPECIFIC TESTS FOR WHICH DGCA WILL BE INVOLVED**

The DGCA will notify CAAC and the COMAC concerning request CAAC to witness tests for Additional Technical Conditions as necessary on behalf of DGCA and will identify the DGCA approved test program to be used.

CAAC will verify the reported certification test results and will forward them to the DGCA. DGCA will review these test results and notify CAAC (with copy to COMAC) of their conclusions.

The DGCA may request CAAC to approve the test program and or the test results



report on behalf of the DGCA.

## **POST TYPE CERTIFICATION ACTIVITIES**

### **Continued Airworthiness**

- a) In accordance with ICAO Annex 8, CAAC will promptly inform DGCA of all mandatory airworthiness modifications, special inspections, special operating limitations or other actions necessary for maintaining the continuing airworthiness of the products, and make any applicable Airworthiness Directive available to DGCA in time.
- b) DGCA will promptly notify CAAC and COMAC of any unsafe condition associated with the design, manufacturing or maintenance of the products that are in service in the Republic of Indonesia.
- c) CAAC will notify DGCA, where appropriate, of any action it deems necessary to correct any unsafe condition in the type design that may be discovered after the type validation, including any actions in respect of components designed or manufactured by a supplier under contract to COMAC.
- d) CAAC, upon request, will assist DGCA in establishing procedures deemed necessary by DGCA.
- e) CAAC will notify DGCA any revocation, suspension, or transfer of the CAAC Type Certificate.

## **OPERATIONAL DATA AVAILABILITY**

CAAC will ensure the applicant to make available at least one set complete operational data and any change to it, which will be necessary used to the Indonesian operators before the data must be used by a training organization or an Indonesian operator.

## **DESIGN CHANGES**

According to DGCA procedures, DGCA normally recognized without further investigation of the CAAC approval of design changes or modifications which do not affect TCDS. However, DGCA reserves the right to make a technical validation on other design changes and will inform COMAC and CAAC accordingly. When investigation is completed for these changes, DGCA will notify CAAC and COMAC of their approval. CAAC will make availability any applicable CAAC's Issue Papers applicable to such changes to DGCA.

At the request of the DGCA, the CAAC will assist the DGCA in determining whether the design of alterations, modifications or repairs made under the control of the DGCA, complies with the DGCA certification basis before the change is approved and implemented.

## **DOCUMENTS**



## DOCUMENTS ASSOCIATED WITH TYPE CERTIFICATION REQUIRING FORMAL APPROVAL

During the validation process, there are documents which require formal approval as necessary, included are:

- DGCA Approved Airplane Flight Manual
- DGCA Approved Airworthiness Limitations
- DGCA Certification Maintenance Requirements
- CAAC Instruction for Continued Airworthiness

Other documents will be added, as appropriate.

### COMAC DATA

All data received by the DGCA during the validation process and which are the property of COMAC will be protected from disclosure to third parties or persons in accordance with the laws pertaining to and regulations of the DGCA.

### OTHER AGENCIES

None

### AMENDMENTS

This arrangement or appendix can be changed with the mutual agreement of the parties. Any changes in the services provided or provisions must be submitted 120 days before the Working Arrangement is ended and formalized with appropriate written amendment signed by both parties.

### ENTRY INTO FORCE, DURATION, TERMINATION

- This Working Arrangement shall enter into force upon signature of both Parties and shall remain in force until terminated.
- This Working Arrangement shall remain in effect throughout all phases of the ARJ21-700 Aircraft type certificate validation program unless it is superseded, revised, or terminated
- Each Party may terminate this Working Arrangement at any time by giving to the other Party written notifications at least 60 (sixty) days in advance.
- The expiration of the term or termination hereof will automatically discontinue any on-going activities or projects made under this Working Arrangement, unless the Parties decide otherwise.

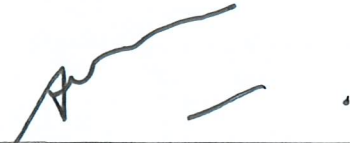
### AUTHORITIES

The DGCA and the CAAC agree to the provisions of this working arrangement as indicated by the signature of their duly authorized representatives.

Signed in duplicate at Cengkareng/Beijing, on the 17<sup>th</sup> day of September, 2019, in the English Language, all texts are being equally authentic.



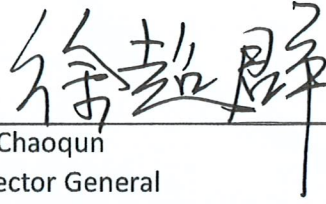
APPROVED BY



CAPT. AVIRIANTO. S. PD. MM  
Director  
Directorate Airworthiness & Aircraft  
Operations  
DGCA-Indonesia

Date

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Xu Chaoqun  
Director General  
Aircraft Airworthiness Certification  
Department  
CAAC-China

Date

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Appendix 1

Address

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