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DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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AGENDA ITEM 3: AVIATION SAFETY

**MEASURES FOR ENHANCING STANDARDIZATION OF
AIRCRAFT TYPE TRAINING SPECIFICATIONS**

Presented by the People's Republic of China

SUMMARY

This paper, based on the practices of Member States in the management of type-specific qualifications, proposes a process for enhancing standardization of aircraft type training specifications (including pilot training and maintenance personnel training), taking into consideration relevant provisions in Annexes 1, 6 and 8.

There is a need to clarify the role of type certificate holders (TCHs) as the source of aircraft type training specifications, and establish appropriate responsible management systems.

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1. INTRODUCTION

1.1 Lessons learned from two 737MAX fatal accidents indicated, it is not only related to the design defects of airplane's Maneuvering Characteristics Augmentation System (MCAS), no sufficient training for relative flight crews and maintenance personnel were also important factors.

1.2 In international practice, an approach generally used by some Member States is to develop pilot type rating requirements and training specifications for specific aircraft types jointly with holders of type certificates, as is the case with the process of Flight Standardization Board (FSB) adopted by Federal Aviation Administration (FAA) and Civil Aviation Administration of China (CAAC), the process of Operational Suitability Data - Flight Crew Data (OSD-FCD) by European Union Aviation Safety Agency (EASA), and the process of Operational Evaluation Board (OEB) by Transport Canada Civil Aviation (TCCA) and National Civil Aviation Agency of Brazil (ANAC). These processes, however, are not mentioned within the framework of ICAO's documents (only partially mentioned in Doc 9379 in paragraphs addressing cross-crew qualifications).

1.3 Chapter 2, 2.1 of Annex 1 sets out general rules for pilot licences and ratings, which although include a requirement to establish type ratings for certain aircraft, but do not provides training specifications for type ratings. Instead, it is in Annex 6 that the requirements for type rating training and proficiency checks for flight crews are provided for. As a result, although Member States generally issue type ratings by endorsing the ratings on licences, the standards for type rating training specifications are not harmonized. Even the above FSB, OSD and OEB processes are not entirely consistent for the output.

1.4 In terms of the impact on flight safety, pilot licences and ratings are the basis for ensuring that pilots are competent to fly safely, but type ratings in particular can reflect pilots' competency in a more direct way. Especially for complex aircraft, a practical competency-based training (CBT) needs to be specific to aircraft type, but differences among Member States in type rating requirements and standards should be a concern.

1.5 Similar problems can be found in maintenance personnel licensing. Even more, only a few Member States have established, jointly with holders of type certificates, the requirements for type endorsement and training specifications, such as EASA's Operational Suitability Data - Maintenance Crew Data (OSD - MCD) process, and the Maintenance Review Board (MRB) process adopted by CAAC.

2. DISCUSSION

2.1 The key solution for the above issues is to enhance the requirements of TCHs to serve as the source of aircraft type training specifications (including pilot training and maintenance personnel training). The reason is that TCHs are the best role with qualification, and should be responsible to develop proposals for the training specifications of the aircraft types they manufactured, as same as instructions for continued airworthiness (ICAs) required by Annex 8 and Airworthiness Manual (Doc 9760).

2.2 The proposals developed by TCHs, following the FSB, OSD or OEB process, should be adopted by national civil aviation authorities as aircraft type training standards, and provided to aircraft operators for reference. This approach will also solving the problems on inconsistency in the outputs of the processes adopted by the different civil aviation authorities.

2.3 To enhance the requirements for TCHs to serve as the source of aircraft type training specifications requires theTCHs to establish a team of specialists, clarify their responsibilities and procedures to cooperate with the development and research processes. This is also a weak area for

many manufacturers, especially in the context of increasingly frequent design changes without changing the basic type design, which, with their cumulative nature, have resulted in heightened risks to operational safety due to the inadequacy of training. This is a problem that should not be overlooked.

2.4 CAAC's policy documents have specified the relevant requirements, which have been implemented among the TCHs of domestic aircraft type. The next step is to trace imported aircraft, and establish appropriate management systems in particular.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) Supporting the CAAC's proposals for ICAO to amend Annex 1 and 8 to clearly define the type rating training specifications, and enhance the requirements for TCHs to serve as the source of such standards; and
- b) Considering the harmonization in standards for type/type rating training within Asia-Pacific Region.

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