International Civil Aviation Organization

Twenty-Ninth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/29)

Bangkok, Thailand, 19 – 22 August 2024

Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

CHINA RMA INTRODUCTION OF FIELD RESEARCH

(Presented by China RMA)

SUMMARY

China RMA conducted field research covering seven Chinese Regional ATMBs in the first half of 2024, communicating with controllers in terms of RVSM control operation. This paper presents some information relating to the field research.

1. INTRODUCTION

1.1 With the application of some new technologies in Chinese control operations, control procedures are changing accordingly, and flight scenarios are also changing. In order to better understand the current situation of control operations in Chinese RVSM airspace, China RMA conducted field research covering 7 Chinese Reginal ATMBs in the first half of 2024, communicating with controllers in terms of RVSM control operation.

1.2 Through this field research, China RMA understands the real flight scenarios of typical and frequent LHD events, such as turbulence and Loss of RVSM capability categories, which helping us better analyze LHD events. Moreover, China RMA has a deep understanding of LHD collection and control operation in hot spot area, such as the AKARA Corridor. Based on the content of the field research, China RMA will assist Chinese Air Traffic Control Bureau in revising the regulation of air traffic control in Chinese RVSM airspace.

1.3 This paper presents some information relating to the field research.

2. DISCUSSION

2.1 The field research covers a total of eight topics and 33 questions, including but not limited to:

a) Non-RVSM aircraft operation

b) LHD event collection mechanism

c) Aircraft RVSM status changes due to onboard equipment malfunction

d) ATC procedure under turbulence

e) Strategic Lateral Offset Procedure

f) Control transfer methods and transfer agreement

g) Horizontal and vertical separation standards

h) ATC automatic system alert types

2.2 223 LHD events occurred in the Chinese RVSM space, 90 resulted in loss of RVSM operation capability due to airborne equipment failure during flight, most of which were TCAS failures. In this field research, China RMA had in-depth exchanges with controllers from various regions on the flight scenarios over mid-air TCAS equipment failure and the work procedures of pilots and controllers. TCAS equipment is an important measure to prevent midair collisions. Therefore, during the ground clearance phase, TCAS failures must be strictly released according to the MEL (Minimum Equipment List). However, the TCAS failure itself does not affect aircraft height-keeping performance, thus TCAS midair failures should not be considered as a rationale for losing RVSM operational capability, and the aircraft can fly according to the original plan without the need to lower altitude or diversion. The responsible controller only needs to strengthen monitoring. If multiple aircraft in a sector experience TCAS failures in the air, it will have some impact on airspace safety.

2.3 Then China RMA conducted field research at the East China Regional ATMB, the controllers from Shanghai ACC introduced the horizontal and vertical separation standards in the AKARA Corridor, flight situation control transfer method, etc. China RMA introduced the LHD event sharing between China RMA and PARMO and showed them the Statistical analysis of LHD events confirmed by both Shanghai ACC and Incheon ACC. All events that occurred in the Corridor were transfer events, and receiving ACC could confirm the transfer information before the aircraft passed the transfer point, so there was no operational risk during these events.

2.4 China RMA also learnt about the ATC automatic system alert types. The system alarms the controller over 60 meter vertical separation is reached, effectively reducing the LHD events and their generated risks. China RMA will present a paper detailing the application of automated system alarms at the next meeting.

3. CONCLUSION

3.1 The field trip improved our understanding of LHD event analysis capability in the ATCs and supported the amendments of the regulation from CAAC or ATMB.

4. ACTION BY THE MEETING

4.1 The meeting is invited to:

a) review the information provided in the paper; and

b) discuss any relevant matters as appropriate.

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