



**ASSEMBLY — 41ST SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 14: Aviation Security - Policy**

**INTERNATIONAL COOPERATION FOR THE PROMOTION OF DEVELOPMENT AND UTILIZATION OF AVIATION ADVANCED SECURITY EQUIPMENT**

(Presented by Republic of Korea)

**EXECUTIVE SUMMARY**

It is necessary to re-establish the existing performance certification system by creating consistent standards and methods for aviation security equipment certification and related technologies.

And the requirements for the security search technologies of each country should be reflected in the system without bias. To respond to the threats of international terrorism, the paper proposes ICAO to create an environment in which the Contracting States can introduce and establish performance certification systems for aviation security equipment.

In addition, the paper proposes to establish technical requirements for advanced security equipment and to prepare a universal test procedure and methodology.

**Action:** The Assembly is invited to:

- a) take note to the information and assessment provided in this working paper;
- b) review the cooperative plan for the establishment of an advanced security equipment performance certification system; and
- c) consider reflecting the contents of this paper to the Global Aviation Security Plan.

<i>Strategic Objectives:</i>	This working paper relates to the <i>Security and Facilitation</i> Strategic Objective.
<i>Financial implications:</i>	The activities referred to in this Paper will be undertaken subject to available resources.
<i>References:</i>	Annex 17 – <i>Aviation Security</i> Document 8973 Restricted – ICAO <i>Aviation Security Manual</i>

## 1. INTRODUCTION

1.1 As international terrorism becomes increasingly sophisticated and diversified, aviation authorities are in urgent need of measures to strengthen security and protect passengers against these threats.

1.2 To address this, ICAO has established and implemented a Global Aviation Security Plan (GASeP) which includes the application and utilization of advanced technologies. The Republic of Korea fully supports ICAO, governments, industry, and stakeholders in calling for aviation security improvement worldwide.

1.3 GASeP is a prerequisite for the continuous development of the air transport industry, and there is a need to establish guidelines for performance certification systems to promote the introduction and utilization of advanced equipment.

1.4 Accordingly, Korea introduced a performance certification system for security screening equipment in 2018 and is working to establish performance certification standards and test methods while conducting research to develop advanced equipment. According to 「The basic plan of aviation security」, established in 2022, the security screening equipment currently deployed in airports in Korea is being improved.

## 2. TRENDS IN DEVELOPMENT OF ADVANCED SECURITY EQUIPMENT

2.1 Aviation threats are not standardized and vary widely. As it is easy to obtain information and material from the Internet, the threat involving the use explosives is expected to evolve faster than the countermeasures.

2.2 While explosive detection systems have been developed and utilized mainly to detect military and commercial explosives, the explosives used in terrorist attacks vary in types and forms.

2.3 Currently, the main technologies utilized in aviation security equipment are X-ray imaging technologies, metal detection technologies, and explosive detection technologies. R&D on the development of advanced equipment is actively carried out globally to counter terrorism.

2.4 Advanced security equipment technology trends will contribute to improving the detection rate and accuracy of terrorist threat detection by utilizing and combining sensor technologies.

2.5 The introduction of in-line real-time search technology is expected to minimize delay and passenger inconvenience at airports, as it will strengthen security screening through technology convergence, such as spatial matching of passenger and carry-on baggage screening.

## 3. THE NECESSITY OF COOPERATION IN PERFORMANCE CERTIFICATION SYSTEM

3.1 The Aviation Security Equipment Performance Certification System is led by the United States Transportation Security Administration (TSA) and the European Civil Aviation Conference (ECAC).

3.2 The Civil Aviation Administration of China (CAAC) implements policies related to aviation security equipment, acts as a certification authority for aviation security equipment, and operates a specialized laboratory. The Security Equipment Evaluation Office (SEEO) is responsible for performance evaluation tests.

3.3 The Korea Institute of Aviation Safety Technology (KIAST), a government-accredited institution, has been designated as an aviation security equipment certification institution, and the Korea Testing Laboratory (KTL) has been designated as a testing institution.

3.4 Certification standards for new technologies are under development in major countries through continuous research and committee consultations, and new technologies with unclear equipment classification cannot apply for certification until appropriate standards are developed.

3.5 Aviation security equipment certification standards and test technologies are very sensitive to changes in international terrorist tactics and screening technologies, which is why it is necessary to establish consistent standards and methods to adopt rapidly changing security technologies.

3.6 With the trend of adopting advanced security equipment that reflects the requirements of each country, the need for the re-establishment of the performance certification systems is emerging.

#### 4. **DISCUSSION**

4.1 Although developed countries have contributed to the development of aviation security by leading the aviation security equipment performance certification systems, it is difficult to utilize advanced technologies immediately as screening technology rapidly develops.

4.2 With increasing international terrorism threats, ICAO has been actively working to create an environment that fosters international cooperation and encourages the Contracting States to use performance certification systems. This is also to promote the development and utilization of advanced security equipment that is in line with the rapid development of science and technology. The paper suggests that ICAO and the Member States come up with a plan to establish a performance certification system for aviation security equipment. Hence, the paper proposes to establish technical requirements for advanced security equipment for the following items and prepare common test procedures and methodologies:

- a) Standardize screening image format for integrated baggage screening;
- b) Minimum requirements for explosive detection equipment;
- c) Artificial Intelligence-Based Reading Technology Requirements; and
- d) Cyber Security Requirements for Advanced Security Equipment